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THE ROLE OF SATELLITES IN THE CANADIAN BROADCASTING SYSTEM

A STUDY COMPLETED FOR
THE TASK FORCE ON BROADCASTING POLICY

VIDEO WORLD INC.
COMMUNICATIONS CONSULTANTS

FEBRUARY, 1986

P R E F A C E

Video World Inc. began work on its study of The Role of Satellites in the Canadian Broadcasting System for the Federal Task Force on Broadcasting Policy late in October of 1985, immediately upon agreement being reached for the commissioning of the project. The contract for the report was executed on November 18 of that year and an interim report was submitted to the Task Force on January 7, 1986.

The researchers assigned to the project undertook a review of a massive volume of material available from a wide range of Canadian and foreign sources. In all, more than 90 separate sources of reference on the subject were examined, including federal statutes, government policy statements, documents of the Department of Communications, announcements and decisions of the Canadian Radio-Television and Telecommunications Commission, previously commissioned studies on the subject for both the DOC and CRTC, position papers developed by Telesat Canada and Canadian Satellite Communications Inc., interventions to CRTC proceedings submitted by the Canadian Cable Television Association, the Canadian Association of Broadcasters, the Canadian Broadcasting Corporation, the CTV Television Network, the Canadian Motion Picture Distributors Association, and other interested parties such as the Saskatchewan and Manitoba provincial governments.

In addition, the staff reviewed a great many other documents including material made available by the Federal Communications Commission, Washington, bilateral letters of agreement between Canada and the United States, various international treaties regarding broadcasting and copyright to which Canada is a signator, as well as all tariff agreements, domestic and international, which pertain to the use of satellites in association with Canadian broadcasting.

In addition to a thorough examination of this reference material, the staff also considered the work in this field by more than 20 academic and industrial analysts and commentators of international renown. Interviews were conducted with more than 12 high-level specialists on the subject of satellites and their broadcasting applications, including representatives of the DOC, CRTC, Telesat, CANCOM, CCTA, CAB, CBC, CTV, TVO, TVB and Global and the

Ontario Department of Transportation and Communications.

We wish to express our appreciation to the Executive Director and staff of the Task Force for their cooperation, assistance and encouragement in the completion of this work. Our thanks go also to those who so readily gave of their time in the consultative process necessary in developing much of the material in this report. In particular, we wish to acknowledge the cooperation and input provided by the DOC, CRTC, Telesat and CANCOM. Lastly, my personal appreciation for the untiring efforts of the staff engaged in this project, most especially the contribution by the senior researcher who co-ordinated the entire effort, William Lim, a graduate student of York University's Faculty of Arts, Division of Social Science, who holds his degree in mass communications and economics.

Ronald G. Keast, Ph.D.
President
Video World Inc.
February, 1986

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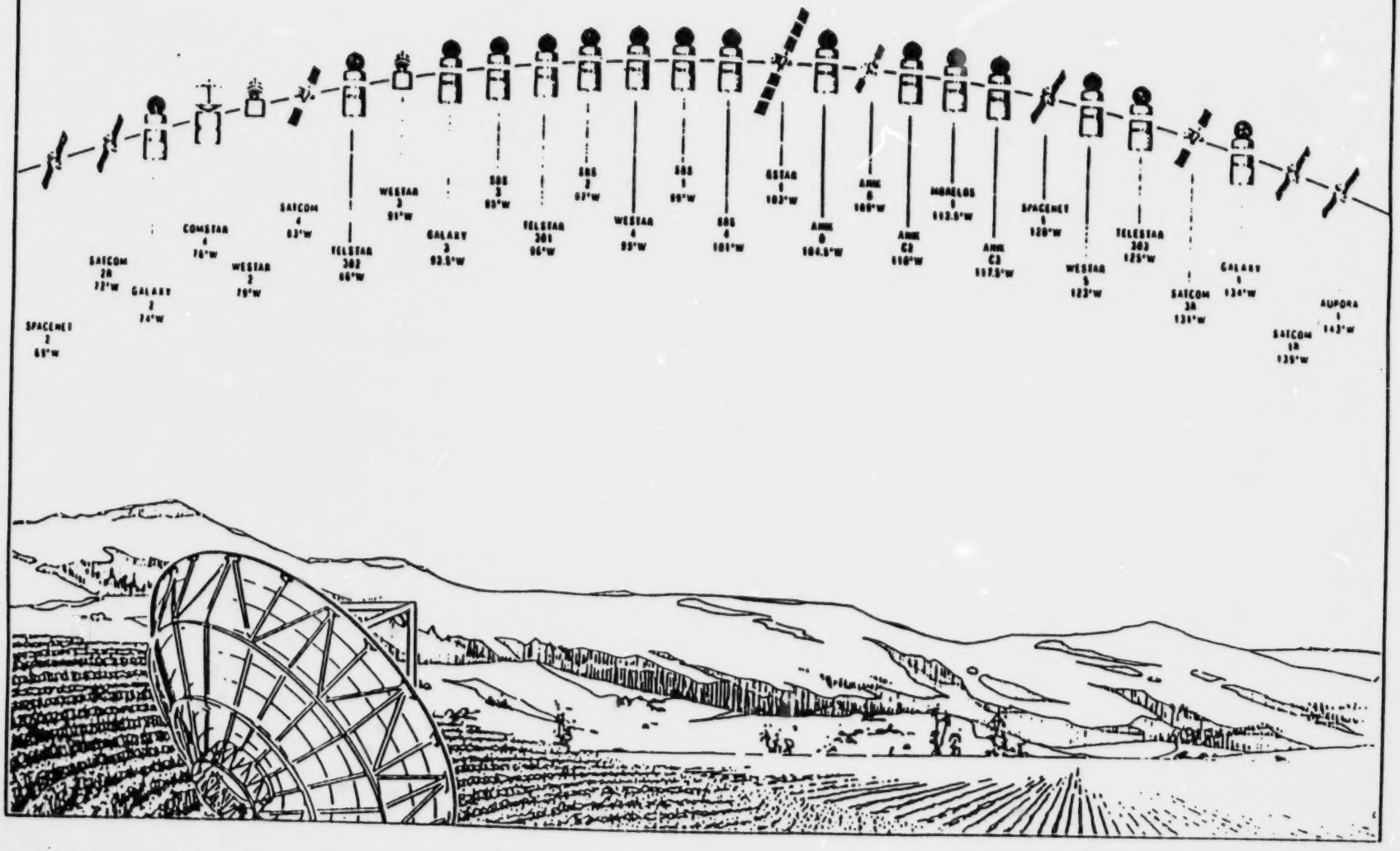
Charting The Satellites

from Earth . . .



Hughes Communications

INTRODUCTION

It is estimated[1] that by the year 2000 more than 6,700 satellite transponder channels will be in use throughout the world, many of them employed for the distribution of programmed television services. Very few of those channels will be of Canadian origin; however many of them will be receivable by Canadian audiences, either by direct reception in the home through the use of small, low-cost TVROs or dishes,[2] or by way of subscription to Canadian cable delivery systems.

The advance of satellite technology will irreversibly affect the structure and performance of the Canadian broadcasting system. Satellites are likely to have a more profound impact upon the effectiveness of existing legislation, the setting of appropriate policies, the aptness of regulation, and the fiducial management of the various components of the Canadian broadcasting system than any other technological development throughout the history of broadcasting.

Canada was propelled into its role in satellite technology aboard a U.S. Thor-Agena rocket, launched from southern California during the night of September 28, 1962, which placed in geostationary orbit the Alouette 1 satellite. With that historic launch, Canada became the third nation to use the new and rapidly developing technology. Since that date, Canada has continued to make impressive and important contributions to the peaceful use of space.

All communication satellites serving North America are positioned in stationary equitorial orbit some 22,300 miles from the earth's surface, roughly between 83 degrees longitude west and 137 degrees longitude west. There are three types of satellites now in general use; those which operate in the 6/4 GHz band, commonly identified as C-band satellites requiring larger receiving dishes or TVROs than those which operate in the 14/12 GHz band, more readily known as KU-band satellites, and the "hybrid" satellites which operate in both frequency ranges. C-band satellites are capable of delivering signals within a national or continent-wide coverage area or "footprint", while KU-band satellites can deliver their transmissions only within more narrowly-confined "regional" areas.

For the purpose of achieving distribution of broadcasting signals, satellites are analagous to conventional terrestrial transmitters except that the area of coverage is far greater. Satellite

"footprints" can be controlled to within pre-determined areas of coverage as can terrestrial transmitters. Conventional, over-the-air transmitters for television usually serve a coverage area of about 60 miles in radius whereas the transmission of the same signal by satellites can span several provinces or the entire nation.

It is this extra-territorial feature of signal distribution which introduces both positive opportunities and some troubling new problems when satellites are used to distribute broadcasting signals.

In a country as vast as Canada where the rural population is so thinly dispersed, it is not possible to supply a sufficient range of television service, if any choice at all, by way of long-haul microwave circuits to small and remote communities where the economic circumstances will not even support either a local radio or television service, or the introduction of a conventional cable delivery system.

In these cases and for the provision of service to isolated individual households, distribution of television signals by satellite has proved essential. But, as is the case for the supply of all goods and services to small, distant and remote or isolated locations, the real costs are always disproportionately higher than provision of service in large, southern communities, and is sometimes even prohibitive. That factor also prevails for the delivery of broadcasting services by satellite to some small communities or individual households in remote locations.

Before the advent of Canadian satellite initiatives to provide television service to meet the demonstrated needs and interests of Canadians who live beyond the reach of conventional television delivery, many individual households and small communities invested in satellite receiving dishes. That practice continues and is expanding. While the Canadian Broadcasting Corporation began using satellite distribution in 1973,(3) most of the programmed television services received by the TVROs in use in Canada originated from the United States.

The Canadian Radio-Television and Telecommunications Commission (CRTC), acting under encouragement from two different governments, enpanelled two special committees to enquire into the employment of satellites to serve the needs and interests of Canadians who either had access to no Canadian television at all or who had an insufficient variety in choice of alternative viewing. Each of

these special CRTC committees included public representation from beyond the Commission.

The first committee was prompted by the then Liberal Minister of Communications, Francis Fox, and was chaired by CRTC vice-chairman Real Therrien. While it was officially designated as the "Committee on Extension of Service to Northern and Remote Communities", it quickly became known as the Therrien Committee. It released a rather far-reaching and comprehensive report in 1980, entitled "The 1980s: A Decade of Diversity". Among its many observations were these: "...immediate action must be taken to meet the needs of many Canadians who believe that, as regards broadcasting, they are being treated as second-class citizens... there are also tens of thousands of Canadians who are underserved, by any standard, even though their communities cannot be described as geographically remote. In short, there are several million Canadians who have reasonable cause for complaint and, in rapidly increasing numbers, they are seeking to satisfy their needs by the unauthorized reception of broadcast signals from American satellites... alternative television must be provided from Canadian satellites with no further delay..." In considering a private sector initiative to meet the situation, rather than a publicly-funded remedy, the Therrien Committee Report wondered somewhat prohetically "what would happen if it were not a commercial success".

In addressing the overall "superstation" question, the Therrien Report observed that one particular characteristic of satellite carriage of broadcast signals deserved special attention: "... satellite signals can be received, broadly speaking, in every party of the country. Any independent station carried by satellite could become, in effect, a new competitor for every broadcaster. And it is on the broadcasting stations (whether or not they are affiliated to one of the national networks) that the system relies, and must continue to rely, for local and regional news, information and other programming... [Therefore] any proposal for new satellite services must take into account an assurance that the provision of local and regional programming be maintained and expanded..."

The Therrien Committee nevertheless concluded that the CRTC, "should immediately call for license applications for the delivery, in remote and underserved areas, of a range of Canadian satellite television services that whould be attractive to Canadian audiences." The Commission acted swiftly in all respects.

The Therrien Committee Report thereby fostered the creation of Canadian Satellite Communications Inc., better known now as CANCOM, a private, entrepreneurial venture by a consortium of broadcasting companies which undertook to provide for the satellite distribution of Canadian television and radio signals to northern and remote communities.

CANCOM, while serving as a private sector instrument of public policy to resolve needs and interests for television service in northern and remote locations, has brought a range of troubling issues which continue to make difficult the setting of future policy regarding the effective use of satellites for Canadian broadcasting. These concerns have frequently been expressed to the CRTC and became the focus of special attention in 1984.

On December 20, 1984, at the request of the new Conservative Minister of Communications, Marcel Masse, the CRTC established its second special committee to enquire into the use of satellites and the provision of broadcasting service to northern, remote and underserved areas of Canada. Chaired by retiring Commissioner Paul Klingle and known as the "Task Force on Access to Television in Underserved Communities", the Committee began its work immediately.

As the Therrien Committee did three years earlier, the Klingle Committee or Task Force (which included Real Therrien as one of its members) sought various outside representatives from government and industry. One of those was Charles Feaver, Senior Policy Advisor on Telecommunications Policy to the Government of Manitoba who, in 1980 as a member of the Therrien Committee had represented the Government of Saskatchewan.

Many of the general issues related to the broadcast use of satellites, and in particular the concerns related to CANCOM, which had been raised during numerous Commission hearings, were brought to the attention of the Klingle Task Force. These included the superstation issue, the distant signal factor, copyright and contractual rights, the logic of licensing question, territorial rights associated to program distribution, network affiliates' relationships, the maintenance of local services, program duplication, simultaneous program substitution and the time zones reality - all subjects of detailed examination in this study. So too is the matter of the cost of providing service.

Paul Klingle summarized his committee's report, entitled "The Costs of Choice" which was released at the end of February 1985, by observing that the "fundamental problem" related to satellites and the provision of television service where it is most needed "is one of cost" and "not that programming choice does not exist". In his view (and more recently that of some of the provinces) "it is that the cost of providing [service] in small, sparsely populated areas is often prohibitive".

The Klingle Task Force Report noted specifically that "the expense involved in establishing a cable system in a small community is much higher on a per subscriber basis than in an urban centre... [that while] equipment costs are approximately the same, they must be recovered from a smaller subscriber base, which results in higher monthly fees... [that] the high fixed costs of the satellite technology employed by CANCOM" inhibits supply of service and ultimately recommended that "a more flexible regulatory approach relating to the rates charged by Telesat" should be adopted and that CANCOM "should be encouraged... to expand its revenue base, thereby bringing down the percentage of its fixed costs now borne by subscribers in small communities". The Commission adopted the Klingle Report and each of its recommendations.

The Klingle Task Force put the issue of broadcasting and satellites into an important perspective by stating in its summary comments that "it is evident that the entire broadcasting system is being challenged by the explosion of satellite-delivered services, Canadian and American... we are convinced that their impact will be fundamental to the future structure of our broadcasting system".

No aspect of its deliberations will be more important to the Federal Task Force on Broadcasting Policy that the issue of the use of satellites for broadcasting purposes.

The use of satellites for the distribution of specially programmed services, either on a satellite-to-cable or on a direct-to-home basis; their use for the redistribution or extension of coverage of existing television services; and for the reception by cable systems, housing complexes, hotels, motels, taverns and other such establishments, as well as households, of other signals from foreign satellites, offers a number of important advantages and benefits. Not the least of these is the ability to provide service to areas where no other means is practical or

possible. As well, satellites make possible the transmission and reception of improved signal quality.

It is essential, however, to keep in mind that satellites are simply a relatively new, alternative or different means of distribution or delivery of television and radio signals. In that context they are really no different than conventional over-the-air transmitters, microwave circuits, or cable delivery systems. CANCOM's first president, Bob Short, made the point that "functionally, satellite transmission is a '2 hop' microwave transmission and is, in our view, subject to the same law attending extension of signals by any other means".(4)

While Short's analogy may have some appropriate application, it also highlights the functioning reality of satellites and their application for broadcasting in Canada. The essence of this study is not how signals are delivered, but what those signals deliver in terms of content. The issue at hand is not the technology but how and for what purpose it is employed. However it is delivered, will public interest be satisfied through the choice in programming that is provided?

People don't watch the method of delivery, they choose to watch programs regardless of the source or means of access.

NOTES:

1. FCC Study, 1985.

2. Futurist Magazine, April 1985; predicts 48 million DBS viewers throughout North America by 1996.

3. Direct-to-Home Satellite Broadcasting For Canada. Information Services, Department of Communications, June 1983, p.14.

4. Robert E. Short's address to the Broadcast Executives Society, Toronto, January 13, 1982.

PART ONE

FROM ALOUETTE TO ANIK:

THE DEVELOPMENT OF SPACE TECHNOLOGY IN CANADA

1. FROM ALOUETTE TO ANIK: THE DEVELOPMENT OF SPACE TECHNOLOGY IN CANADA

Canada's first satellite, Alouette 1, was launched on September 28, 1962. It signified Canada's first participation in the development of satellite technology and its communications applications.[1] Canada became the third country in the world to successfully put a satellite into operation and was an early participant in the peaceful application of space technology. The establishment of communication satellites with geostationary orbits, first proposed in theory by Arthur C. Clarke, has provided almost limitless transmission capability over wide geographical areas.

Canada's vast size and topographical characteristics have made communications interconnection for all Canadians by terrestrial or land-based means impractical if not impossible. Canada has nearly 10 million square kilometers of territory.* The country incorporates five and one-half time zones and includes natural geographical barriers which impede the easy flow of communications between all parts of the country. Most of Canada's 25 million inhabitants live within a narrow band of land, about 200 kilometers in width, parallel to the U.S. border and stretching some 5,000 kilometers from the Atlantic to the Pacific oceans. Canadians live alongside the world's richest and most industrially advanced nation whose population is at least 10 times that of Canada. The trade links between the two nations are among the most extensive between any countries in the world. U.S. communications technology is highly advanced and its influence, especially in terms of television programming, is the most powerful in the world.

The physical characteristics of Canada, our population dispersion, and the need for a strong bilateral flow of communications have contributed to the historical commitment to the development of an effective Canadian communications infrastructure. Canada has traditionally incorporated new technologies in its existing communications plant, but has not always taken into account the impact of communication advances upon its established cultural industries.

* six and one-half in summer when Saskatchewan remains on Standard Time

The need to successfully operate communications technologies in space has required the creation of new industrial and governmental initiatives in Canada.

Geosynchronous orbits of satellites allow instantaneous transmission of signals anywhere within the angle of sight of the satellite, and while this feature has the potential to overcome most of the technical problems and limitations associated with terrestrial means of delivery, there are a range of new problems related to this method of distribution which are addressed later in the study.

1.1 The Alouette-ISIS Program

Canada's first satellite was part of an experimental project identified as the Alouette-ISIS program. ISIS stands for "International Satellites for Ionospheric Studies". It was a joint venture between Canada and the U.S. and it included a total of four Canadian satellites. ISIS was designed to conduct comprehensive studies of the ionosphere. The Canadian satellites were designed and built by Canadian industry under the direction of the Defense Research Telecommunications Establishment (DRTE). The rockets and other launch facilities were supplied by the National Aeronautics and Space Administration (NASA). The success of the venture led the Canadian government to accelerate the development of domestic industrial capacity for space endeavours, and to encourage private enterprise to seek applications of satellite technology to benefit all Canadians.

> The Alouette-ISIS program established Canada's place in the space age. The venture was an achievement in both science and technology and led to a rapid expansion of Canada's activities in space, and the development of new industrial opportunities.

1.2 The Communications Technology Satellite Program (Hermes)

Launched in 1976, the Communications Technology Satellite or Hermes was designed to explore the practical use of satellite technology for data and broadcasting applications. The objective was to develop new satellite systems for a wide range of communication services. The Hermes project was also a joint exercise of Canada and the U.S. Their

co-operative effort in 1973 led to the first domestic Canadian satellite communications service. It extended the development of high-powered satellite transmission in the 14/12 GHz portion of the radio spectrum, and Hermes was launched as the world's most powerful communications satellite, the forerunner of a generation of direct-to-home broadcast or DBS satellites. Hermes was used to conduct communications experiments aimed at identifying and satisfying communication needs for the 1980's in both Canada and the U.S.[2]

> The Hermes program represented Canada's transition from scientific to operational applications of satellite technology. It facilitated the establishment of a domestic satellite communications system in Canada.

1.3 Domestic Communications Satellites in Canada: The Anik Satellite Series

The Anik satellite allowed the development of Canada's first fully operational series of satellite-delivered broadcast services. The CBC was the first customer. Since then, a number (two of which are in storage orbit) of other public and private conventional television broadcasters have signed up for full time or occasional use of satellite service. Telesat currently operates four satellites (eg. which two are in storage orbit) each of which carry up to 24 satellite channels for the transmission of broadcast signals.

The Anik series of satellite represent the fully operational stage of satellite development in Canada. Telesat Canada, which operates the satellites, offer two frequency bands, 6/4 GHz and 14/12 GHz which can accommodate full Canada service or regional Canadian service. On the 6/4 GHz space segment, a satellite is capable of receiving signals in the frequency band 5.9-6.4 GHz and amplifying and re-transmitting these signals in the frequency band of 3.7-4.2 GHz. On the 14/12 GHz space segment the same occurs with reception of signal on frequency band 14.0-14.5 GHz and retransmitting in the 11.7-12.2 GHz. Anik A, B and D satellites all operate in the 6/4 GHz band utilizing the same frequency range as terrestrial microwave, meaning that those satellite transmissions are prone to similar interference problems. Earth stations receiving on the 6/4 GHz band need comparatively

larger, parabolic dishes. Anik B is a dual band satellite operating within both the 6/4 GHz band and 14/12 GHz band. It provides coverage of all of Canada on the 6/4 band and has four spot beams for regional coverage within the 14/12 band. Anik C, the most recent series of satellites, has interim direct-to-home or partial DBS broadcast capability.

1.4 TV Program Transmission via Satellite

There are two essential features in satellite transmission of programs, whether for general distribution or private feeding from a remote pickup back to the studio. These are: 1) the earth segment, and 2) the space segment.

The earth segment has two components, an uplink and downlink service. Uplink services are either leased to the service operator by Telesat or they can own their own facilities. There are several different combinations of uplink services offered by Telesat: fixed uplinks which are dedicated to a specific customer or common user facilities which are shared by two or more customers; mobile uplinks which are available across Canada and fixed uplinks for radio services. A service operator can install on a permanent basis a transmit earth station on his own. Using fixed uplinks of common carriers is the simplest of alternatives for getting a signal to the satellite. Programs provided by service originators are either received over-the-air or sent by coaxial cable to TOC's (Technical Operations Centres) operated by the telecos which is then sent over a carrier-owned microwave circuit to an earth station where 8m parabolic dishes transmit the signal up to the satellite. Downlink services include either all Canada coverage in the 6/4 GHz band or four spot beams for regional coverage at 14/12 GHz. Comparatively large (3m+) parabolic dishes are required to receive low-power signals transmitted by 6/4 satellites while dishes between the sizes of 1.2m to 1.8m are generally suitable for 14/12 GHz reception.

In the case of the space segment a broadcaster can choose from three usage categories on full period 6/4 or 14/12 GHz service:

1) fully protected, non-preemptible;
2) unprotected, non-preemptible;
3) unprotected, preemptible.

Under a "fully protected" type service the signal will not be preempted in the event of service interruption. Telesat will provide a protected RF channel on the same or another satellite. Under a "unprotected non-preemptible" the service is unprotected in the event of service interruption. A protected RF channel is not provided with this type of service. The final category, "unprotected preemptible" service is unprotected in the event of service interruption. A protected RF channel is not provided with this type of service, and the service may be preempted to utilize the RF channel to restore "fully protected" type service. Each category - moving from "fully protected" to "unprotected, preemptible" is progressively less expensive with savings up to 30% and 37% respectively.

The Anik satellite has provided the technical capability to increase the array of television channels. Innovation in satellite technology has also allowed more Canadians to access additional signals, especially those in northern and remote areas.

1.5 Satellite Technology: Innovation, Industrial Development and Social Objectives

Most Canadians have already benefitted directly from the development of satellite-related technologies. An important objective in both the Alouette-ISIS and Hermes programs was the stimulation of technological innovation and product development in Canada. Early research and development recognized the potential for new products and services. Normal market incentives which could lead to further innovation, were considered to be the best approach.

Because of the technological advantage in point-to-multipoint transmission capabilities, satellites will play an even greater role in broadcasting. This will involve the development of new services, such as interactive videotex and teletext, as well as improving the signal quality and the reach of conventional broadcast signals.

Canada's Alouette-ISIS, Hermes and Anik satellite programs have also provided for the application of space technology to social and political policy objectives. Canadian broadcasting has traditionally been regarded as an important instrument for the

fostering of Canadian culture. Government policies continue to assert that goal for domestic broadcasters. But the particular means of delivery is shifting from land-based conventional transmitters to satellites and to cable.(4) Canadian broadcasting historian Frank Peers observes:

> "Despite the shifts in delivery methods and support structure, the reasons we value broadcasting and the objectives we pursue in ordering the broadcasting system need not change. Our purposes in authorizing and facilitating electronic methods of mass communication should continue to reflect basic values that we have identified over the years. We have little reason to institute new forms of transmission of delivery... in ways that will transgress or nullify the continuing communication objectives that have stood the test of time."

Technological advance should be accommodated, but not at the expense of the objectives of the Broadcasting Act.

NOTES

1. Canada had earlier participated in experiments in space using rockets for the scientific exploration of the upper atmosphere and to investigate certain aspects of space technology for communications purposes.

2. Theodore R. Hatz and Irvine Paghis, Spacebound, Supply and Services Canada, 1982.

3. Telesat Canada Act R.S.C. 1968-69, c.51, s.1.

4. Frank W. Peers, "The Place of Pay-TV in the Canadian Broadcasting System", in The Introduction of Pay-TV in Canada, edited by R. Brian Woodside and Kenneth B. Woodside, IRPP, Montreal, 1982, p.1.

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PART TWO

CONVENTIONAL NETWORKING

VS.

SATELLITE DISTRIBUTION:

TELEVISION SERVICE OPTIONS AND COSTS

2. CONVENTIONAL NETWORKING VS. SATELLITE DISTRIBUTION TELEVISION SERVICE OPTIONS AND COSTS

"The Canadian broadcasting system should be effectively owned and controlled by Canadians so as to safeguard, enrich and strengthen the cultural, political, social and economic fabric of Canada."

Section 3(b), 1968 Broadcasting Act.

2.1 The Objectives of Canada's Broadcasting Policies

Broadcasting has traditionally held a significant place within the development of Canadian public policy. Like all forms of communications, broadcasting is seen as an important instrument in nation building. At the same time, the development of broadcasting as an industry allowed for an expansion of private incentives into what is now a major industrial sector. The history of broadcasting reflects a continual tension between commercial forces and realities on the one hand, and the aspirations of public policy and interest on the other. In this process, certain fundamental goals regarding broadcasting's cultural, political, social and economic roles evolved. These goals have remained in place without alteration or dilution.

Section Four of the study gives a detailed historical analysis of these issues which confront government and the broadcasting system. Broadcasting has always involved the need to adapt to technological change so that both the medium and the message serve the interests of Canadians. Technological change is by no means a new phenomenon associated with the advent of satellite distribution. Despite these changes in the means of broadcast delivery, policy makers have consistently reaffirmed broadcasting's pre-eminent role as a major cultural force which has stood the test of time and change.

While this section provides an evaluation of the balance between conventional networks and the role satellites play and could play within the system, it is important to note the policy framework promoted over the years as the system evolved. The Canadian broadcasting system is one of the most unique systems in the world in that it is truly a "mixed" system of public and private elements. As a reflection of this

makeup, there developed a set of broad policy goals which permitted the CBC to more fully develop its mandate and allowed private broadcasters to pursue the profit objectives while each sector acted as instruments of public policy.(1)

The objectives include:

1) a recognition that all undertakings within the broadcasting system are integral parts of a "single system" comprising of public and private elements;

2) that the public elements of the system shall prevail over the private elements in the event of conflict;

3) that the system as a whole should be encouraged to provide services that are effectively controlled by Canadians to the general preservation and enrichment of Canadian society;

4) that the public element of the system should provide a range of broadcasting service in French and English that is basically Canadian in content and character;

5) that the private sector plays an increasingly significant role in the advancement of broadcasting objectives by using predominantly Canadian resources, and,

6) that every Canadian is entitled to broadcasting services in both official languages as public funds become available.

These goals form the basis of the Canadian broadcasting system and shape the legal, regulatory, political and industrial activities associated to it.

2.2 The Structure of Conventional Broadcasting Services in Canada

Both public and private elements of the Canadian broadcasting system maintain services licensed at the national, regional and local levels. Each particular operation provides a range of service commensurate with its capacity and programming commitments. Local stations provide programming suitable to their particular locale, and are licensed on the principle that their greatest asset is in the provision of local

news and current affairs programming reflective of the communities they serve. A typical local station will schedule programming from a variety of sources. Much of its news and public affairs programming is produced in its own facilities. (Several private stations in the west have co-operated on special projects to produce regionally-relevant programming which will be aired in their respective markets.) The remainder of the affiliate's schedule is either made up of network-source programming or of programs acquired through the syndication market. Stations affiliated to a national network will cede control over part of their programming schedules for the exhibition of network programming. Networks will provide programming for station sales time to advertisers as well as reserved time programming with time sold to network advertisers.

Network arrangements allow for the pooling of financial resources for the production or acquisition of more costly programs than the individual station's capacities permit. These network structures also provide for a truly national reflection of all regions of the country.

As at March 31, 1985, there were a total of 216 originating television stations. A large proportion of these stations are either owned and operated by or are affiliated to the Canadian Broadcasting Corporation. The CBC owns and operates 28 broadcasting stations across Canada and has 32 private affiliates and 832 rebroadcasting transmitters. The largest arrangement of affiliated private stations is the CTV Television Network, which involves 16 owner-affiliated stations and five supplementary affiliates. Together, these affiliates provide service through an additional 251 rebroadcasting transmitters. The Global Television Network, not actually licensed as a network, operates a regional service throughout Ontario consisting of five rebroadcasting transmitters with its programming originating in Toronto and Ottawa. It also provides programming to most western independent stations. The French language TVA Network consists of six affiliated stations and seven rebroadcasting transmitters which provide a French language television service throughout Quebec. The system also includes the services provided by six independent, unaffiliated, private television stations operating in the English language. As Table 2.1 indicates, Canada is provided with a broad range of public and private television service throughout all provinces, but direct, local service in the territories is extremely limited. A rapidly growing component of the system is represented by the provinical educational broadcasters. There are also recently licensed Pay TV and specialty services now available to Canadians and

Canadian Satellite Communications Inc. (CANCOM) which, although licensed as a network serving cable or community low-powered rebroadcast transmitters as affiliates, does not perform the traditional functions of a conventional network operator.

2.3 The Evolution of the Broadcast Environment in Canada: An Assessment of the Canadian Television Marketplace

Broadcasting policy in Canada has traditionally emphasized the "social" and "cultural" expectations and obligations of the system which makes a pure economic evaluation of the conventional broadcasting process difficult. There are also other significant factors which influence the performance of the system. These include:

1) a desire by Canadians for the same standard of "production value" as found in the schedules of the American television networks, particularly in the field of entertainment programming;

2) the popularity of American programming in Canada and its increasing access to Canadians by cable or satellite;

3) the costs of acquiring American programming is infinitely less than the costs to produce Canadian programs;

4) the Canadian broadcasting system must program in both English and French which effectively divides the sources of revenue and other resources applied to programming;

5) an increasing proportion of the total broadcasting system is financed by advertising and subscriptions rather than by government allocations;

6) the private sector of the system relies exclusively on revenues derived from the sale of airtime to advertisers and is therefore dependant upon the size of audience generated by the programming which it offers;

7) advertisers are becoming increasingly more selective in their use of the television medium as more and more alternatives in

placement of their commercial messages become available to them;

8) public broadcasting, both federally and provincially funded, is experiencing increasing budgetary difficulties in the prevailing economic situation.

These circumstances are further affected by the introduction of new delivery technology and new programming services which compete with traditional television services in the scramble for viewers and advertising revenue or public funding.

In the United States, as conventional network audience shares are reduced by the entry of new competitive services, the threshold for survival has been lowered as well. Prime time network programs in the U.S. now achieve a 24 or 25% share when in the past it was necessary to attain a 30% share for a program to survive. This development requires the American networks to target shows more precisely to viewers most sought after by the advertisers. The tendency towards "narrower-casting" by the networks has resulted in network schedules offering greater program diversity.(2) Canadian networks are experiencing the same phenomenon and will need to respond accordingly to the changing circumstances of the Canadian television marketplace.

Canada is one of the most heavily cabled countries in the world. Cable was initially introduced as community projects to provide for improved local reception through a master antenna, and to facilitate the access to distant signals. The main attraction of cable in Canada has been its ability to deliver U.S. signals to subscribers. At 1985, the percentage of total Canadian households subscribing to cable was estimated at 65%. Many analysts believe that cable has reached a level of saturation with little or no further opportunities of growth.

The increasing availability of U.S. broadcast signals in Canada through cable has permitted a significant share of Canadian television viewing attributed to U.S. stations. In 1970, the total of all U.S. signals available in Canada had a 18.4% share of the English-speaking Canadian audience. In 1980, the share had grown to 24.5%, and by 1984 that share exceeded 30%.(3)

The increase in the American signal share of the Canadian audience might have been more dramatic were it

not for the July 1, 1971, CRTC statement on priority carriage of television signals on cable. That statement introduced the Commission's policy which accorded Canadian stations the highest priority of carriage on unimpaired cable channels over any U.S. signals.

A policy of simultaneous program substitution was also adopted in 1973 which required cable systems with at least 3,000* subscribers to comply with the request of a local Canadian television station to delete and substitute a program simulcat by a U.S. station carried on the same systems. The effect of this policy was to preserve the exclusive exhibition right to programming held by Canadian stations, even though it meant that they must schedule their U.S. programs at the same time as the U.S. networks, thus limiting to some extent the setting of total program schedules. While this regulation limits a broadcaster's flexibility in scheduling Canadian programs, it serves to preserve the prime time audience for U.S. programs to its own advantage.

The ability of Canadian private broadcasters to acquire American programming at costs substantially lower than the expense of producing Canadian television programs is the chief means of remaining competitive and financing domestic program production. The sale of Canadian exhibition rights to U.S. programs often represents the first profit realized by American producers; sometimes even the achievement of a break-even point. In general, U.S. prime time programming attracts a larger share of Canadian viewing than domestic productions achieve. Private broadcasters sell audiences to advertisers and therefore charge more for American programs. The current noted increase in the popularity of Canadian programming may soon balance that situation. While only 50% of the private sector's prime time schedule is American, it still generates more than 70% of all revenues. Without that factor in place, Canadian production volume and value would likely decline. It should be noted, however, that the costs to acquire the exhibition rights to American programs in Canada will ultimately be determined by the marketplace as is represented in the increasing number of licensed Canadian competitors seeking U.S. programs for their schedules.

The Canadian broadcasting system, both its public and private elements, provides programming in both

* since revised upwards to 6,000

English and French. The CBC provides French language programming under its mandate given in Section 3(g)(iii) of the Broadcasting Act. Operating expenses for the CBC in 1983-84 totalled $979.4 million - of which $317.4 million was accounted for in the provision of its French language service. For comparison purposes, PBS in the U.S. and the BBC in Britain, each spent approximately $1 billion for service only in English.(4) French-language television service is also provided in Quebec by the TVA Television Network, which is entirely financed from advertising revenues, and by Radio Quebec. French language programming is also made available in Ontario by TVOntario.

2.4 Television Networks in Canada: An Analysis of Industrial Structure and Economic Performance

Network-affiliate relationships can be characterized in two ways. Networks provide programming to the affiliates and permit the local sale of advertising time within and between those programs which are not reserved for network use. Affiliates, on the other hand, allow the networks time within their schedules for the presentation of programs in network reserved time which contain advertising time sold by the networks. Each party benefits from the arrangement, to lesser or greater degrees. The networks charge the affiliates proportionately for the programs they make available for the stations' sales purposes, and affiliates charge the networks proportionately for the use of the network reserved time in their schedules.

Networks produce their own programs or license them from the program producters and distribution agents. The Canadian Broadcasting Corporation maintains its own production facilities (as do private stations) in order to fulfill its increasingly larger Canadian content objectives. The CBC is the largest producer and licensor of Canadian programs. The CBC now schedules approximately 80% Canadian programming and has indicated its intention to phase out American programs by September 21, 1987.(5)

The CTV Television Network's affiliates also own and operate production facilities. As Robert Babe notes, CTV is a unique operation; a "non-profit co-operative" owned by the largest stations for the purposes of: exercising concentrated buying power in the purchase of U.S. network programming and movie rights; acting as an intermediary to facilitate national advertising placement; and serving as an

instrument of cross-subsidization between the wealthy group of stations and the poorer ones.[6]

The Global Television Network, originally licensed to contract with independent producers for the bulk of its programming, also maintains production facilities in Toronto and Ottawa for the production of Canadian programs for its own use and for licensing to several independent western stations.

The greatest advantage of the network-affiliate relationship is the ability to commit larger expenditures in the production and licensing of programs. Networks benefit from the economies of scale in all facets of programming, but particularly in the areas of drama and other entertainment programming. Networking also facilitates larger and more comprehensive news and information operations of a national scale. The cost of program production is able to be spread over a larger audience base. This significantly lowers the cost per unit, thus reducing the financial risk, by distributing the expense over the aggregate base.

2.4.1 Private Television Stations in Canada

The profitability of private Canadian broadcasting licensees varies according to size, type and affiliation. Table 2.2 provides information pertaining to the financial performance of the private television sector over the period 1972 to 1983. This is expressed in terms of the return of investment (R.O.I.) ratio which demonstrates that the industry in total maintained consistently high performance levels over the accounting period. However, it should be noted that the R.O.I. index of performance is an unweighted average invariably skewed by the rates of return earned by the corporations with the largest asset base. In addition, many of the large broadcasting companies like Baton, Maclean Hunter and Selkirk are conglomerates in which broadcasting is only part of their diverse activities. It is possible however to aggregate the results of various broadcast entities on a group basis.

Table 2.3 presents a summary of station-count of reported profits and losses according to group size. It shows that the smallest revenue group of stations, those whose sales are less than $1.5 million, are the most volatile with a signficantly lower potential of generating profit. Smaller stations are unable to realize the economies of scale arising from the initial threshold investment required for television undertakings. Many smaller economic areas are able to

support only one local television service. Competition in these markets is especially destructive upon the established local service. The example most cited is the introduction of Global and three U.S. signals by long-haul microwave and cable to Sudbury, North Bay and Timmins. The audience size attributed to the two original local services was subsequently fragmented to a point that it became unnecessary for national and regional advertisers to purchase time on these stations. As a result, it became necessary to merge the two stations in order to maximize the efficiency of operation. Media directors of Canada's leading advertising agencies have confirmed a continuing trend away from minor markets (less than 100,000) to major markets.(7)

An average station performance profile is shown on Graph 2.1. Based on the analysis by Burns Fry in 1983 (Table 2.4), it indicates that for an average station the costs of programming has risen faster than revenues. This can be attributed in large part to increased competition for American programming by Canadian broadcasters, causing a rapid escalation in the costs of U.S. programming. The costs of producing Canadian programs also showed significant increase. Broadcasters have been able to increase their rates to advertisers, confirming television as still the most dominant medium. However, as one financial analyst concludes: "there will be a trend in the latter half of the decade towards a lower rate of real yearly increases in TV ad revenues. This 'flattening' of TV revenues will be a result of the aggregate effect of the various changes in TV's competitive environment... this will make it more difficult for TV stations and networks to continue raising their ad rates, thereby reducing TV ad revenues."(8)

2.4.2 Advertising Revenues in Canada: A Comparison of Media Costs and Expenditures

Gross advertising expenditures differ between Canada and the United States in terms of the per-capita amount spent by advertisers to reach the consumer in each respective market. As Table 2.5 indicates, U.S. advertisers spend more than Canadian advertisers due primarily to the size of the American market and its dispersion. Large American companies traditionally commit greater budgets to advertising and there are simply more of them in the United States than there are in Canada.

An analysis of major media ratios as indicated in Table 2.6 shows that the opportunities for individual corporate advertising expenditures vary widely between Canada and the U.S. American advertising spending levels are proportionally higher in all media, but particularly in television.

There are several explanations for the disproportionate levels in advertising expenditures between the United States and Canada:

- The United States has an enormous consumer market and industrial capacity which enables the manufacturing sector to market more products. In general, the largest advertisers make the greatest use of T.V. Larger companies in the U.S. also market a wider range of products than in Canada.

- Many of the same products available in the U.S. are also marketed in Canada. Television commercials placed with on American stations often "spill over" into Canada thereby reducing the incentives to as rigorously advertise those products of the same brand in Canada.

- Many of the larger companies in Canada are multinational corporations. These corporations benefit from the effects of overflow advertising, believed to be as large in value as $100 million a year in TV, or about 10% of total television revenues.

- About 80% of U.S. network advertising represent multinational products available both in Canada and the U.S. This is a contributing factor to the steady decline of multinational advertising in Canada.

Graph 2.2 shows a comparison of per capita expenditures in television by advertisers in Canada and the United States. The level of spending by advertisers in the United States has shown phenomenal rates of growth. Between 1978 and 1984 advertising expenditures on television increased in the United States by almost 136%. In Canada the increase in the same period was just 83%. There is a widening gap in per capita expenditures between the two countries. The primary determinants of U.S. television advertising volume are corporate profitability and new product introductions. The proliferation of brands has kept

corporate demand for advertising time strong. Total television revenues in the U.S. reached $20.3 billion in 1985, up 6.8% from $19.1 billion in 1984.[19] Graph 2.3 shows U.S. advertising expenditures in local, national and network television.

Graph 2.4 shows Canadian advertising expenditures in local, national and network television time. Expenditures in all three areas have increased, with the fastest gain shown in national spots on independent and local stations. Television is still considered the most efficient medium to reach the consumer. But as Graph 2.4 shows, the rate of increase in local and network advertising has stabilized, suggesting advertising revenues for certain television operations have reached a plateau. According to many advertising executives in Canada, the increase in television competition does not indicate improvement in audiences for traditional television. To date, there has been little impact on the way advertising budgets are committed but there are indications that the combined effect of audience fragmentation and the increasing cost to use television will bring about a change in the attitude of advertisers to more closely examine and perhaps favour other media.

2.4.3 The Economics of Canadian Television Broadcasting

The costs of U.S. program production can be applied against ten times the viewer base as is available to Canadian broadcasters for domestic productions. The resulting economies of scale means that, on a cost-per-thousand basis, the standard equation, the expense of producing programs is substantially lower in the U.S. than it is in Canada. (As Table 2.7 indicates the CPM for Canadian produced programs is almost three times that on average in the U.S.)

The placement of American programming in Canadian television schedules generates somewhere close to 250% of its cost in advertising revenue, while Canadian prime time programming, with the exception of drama, usually recovers its cost and sometimes generates a profit. Canadian content regulations for the private sector requires 60% Canadian content overall (6:00 a.m. to midnight), with a minimum of 50% between the hours of 6:00 p.m. and midnight. In meeting these requirements, private television operators must attempt to strike a balance between obligation and opportunity, and still remain competitive in their own markets against the increasining availability of American

signals offering no Canadian content. Given the circumstances, it seems quite remarkable that so many Canadian programs, produced at a fraction of the average U.S. cost, now out-perform the majority of American programs available to Canadian audiences.

In 1979, 268 Canadian companies were engaged in the production of programs for theatrical release and for television. Historically, most Canadian productions had been undertaken by the networks. Through the establishment of the Broadcast Program Development Fund in 1983, independent producers gained a far greater opportunity to contribute to the needs of the television industry. The Fund, administered by Telefilm Canada, provides support financing for projects which have a commitment from a broadcaster to exhibit the production within two years of completion. Financing from the fund is usually matched by the producer on a 2:1 basis. Telefilm may apply the fund in support of script and project development as well as to completed productions. There are four categories of programming in which Telefilm can apply the fund: drama, documentaries, variety and children's programming. At least one-half of the total Fund is to be applied to productions to be exhibited by the private sector, with up to one-half to be applied to the CBC/SRC (Societe Radio Canada).

2.4.4 Distribution Practices in Canada

Canadian broadcasters, in addition to their own productions, obtain other programs from Canadian and U.S. distributors. U.S. programs are marketed in Canada usually through branch offices of the major U.S. production and distribution companies. Independent or station-produced Canadian programs, not licensed by the networks, are marketed directly by the private production company, a Canadian distributor, or by the station itself. Some network-produced programs, or other programs which the networks license, are subsequently released for syndication, usually by an agent or the original producing company or station-affiliate.

Various provisions are included under the terms and conditions for the exhibition of a U.S. program by a Canadian broadcaster. These include: 1) the licensing fee which usually provides for two plays within a broadcast season. 2) the right to re-record the program for commercial integration and scheduling purposes only, and 3) exclusivity of exhibition by the broadcaster only for his coverage area. The release pattern, or the period of time within the season when

the program may be scheduled in Canada, is generally consistent with the U.S. network decisions. Failure to comply with the release pattern could trigger pre-mature or additional residual payments to performers and other creative contributors to the programs as are provided for in the production contracts.

While the factor of exclusivity in program exhibition provides for a distinctive competitive advantage to all broadcasters, and despite the fact that such rights are a standard feature of the television industry, exclusivity in Canadian television terms, at least as regards the scheduling of American programs, is essentially a myth. With about 65% of all Canadian households now able to receive by cable all three commercial U.S. network schedules, and since not all American programs can be simulcast by Canadian broadcasters, Canadian viewers customarily have two opportunities in a week to watch most U.S. programs. It is the Canadian program component of a station's or network's schedule which increasingly provides for the necessary, distinctive and competitive advantage of exclusivity. The recent growth in audience appeal of many Canadian programs adds greater value to that distinction.

2.5 The Role of Networks in Program Development

It is essential to recognize that networks perform more than a simple intermediary role on behalf of affiliates. They also make significant contributions in the area of program development, from the initial stages when a concept is delivered, a script outline is drafted, right through to the completion of production, and the vital program promotion. In the process, the networks provide producers with the insight of practical and successful programming experience.

The networks have become partners with their Canadian program suppliers in the entire development process. The network and independent producers are co-investors in the projects, sharing the risks of loss and profits of success.

The role of the networks in Canadian program development is now an essential factor in the growth in volume and competitive quality of domestic productions. Telefilm, through its administration of the Broadcast Fund, has also become a vital partner in the development of Canadian programming. Together, these elements have created a rennaisance in Canadian program production and their acceptance by Canadian viewers.

As noted earlier, an increasing number of Canadian programs in the networks' schedules now attract larger audiences than some popular American programs available to Canadians.

Combined, the CBC English television network and CTV invested more than $338 million in Canadian program production and acquisition in the 1984/85 broadcast season. In addition, Telefilm's Broadcast Fund added another $26 million to Canadian English language productions for television exposure. No accurate data is available to indicate the total investment made in Canadian programming by local affiliates and independent stations. For its part, Global reports investments in Canadian programming totalling more than $20 million in the same period.

The known total of e.penditures by CBC, CTV, Global and Telefilm in Canadian programming during the 1984/85 broadcast season is more than $384 million. That figure does not, however, represent the true value of total production of Canadian programming in that season. All of the Telefilm funding, together with an estimated 60% of the balance or a combined total of $240 million is levered on a 2:1 basis against productions whose total aggregated budgets exceeded some $722 million in the last broadcast season. All but a fraction of that total investment is spent in Canada for performing talent, other creative contributions, services and facilities, and benefits the employment of an estimated 21 thousand Canadians at work within or for the television industry.

Local stations continue to make important and often impressive contributions to the development of Canadian programming, particularly in the field of news and other information programs.

2.6 The Role of Broadcasters in the Extension of Broadcast Services

Broadcast policies have recognized the role of broadcasting in the expression of cultural identity and the need to equalize or make more equitable the range of services available to all Canadians.

Extension of service by the Canadian Broadcasting Corporation was achieved by two principle means. Under its network affiliation agreement a method of cross-subsidization has been maintained whereby revenues have flowed to financially troubled stations, thus sustaining essential services. Extended coverage was achieved by the Accelerated Coverage Program (ACP)

to small uneconomical areas where no television service existed. The ACP has been provided through a special cabinent grant over and above the annual Parliamentary appropriation, and is intended to provide CBC programming to underserved communities with a population greater than 500. It also provided funds for community facilities and reception upgrades. In addition, the CBC provides full coverage to northern and remote areas via Anik D.

Under the terms and conditions of the CTV Television Network Affiliation Agreements, the network has three classes of affiliates: "full affiliates" (the cooperative owners of the network) with revenues over $2 million a year; "affiliates" with revenues under $2 million a year and "supplementary affiliates" which are unable to contribute to the financial support of the network operation. (At present, there are no "affiliates" within the CTV structure.) Supplementary affiliate status was first proposed in 1968 by CTV as a means of achieving extended coverage of CTV service to areas that could not support a full second service. The supplementary affiliates became known as the "twin stick" operations. This was outlined by CTV to the CRTC in 1968 during a November public hearing:

> "In an effort to assist in the rapid extension of alternative television service, the Board now resolves that, in the case of the introduction of alternative service by means of a CBC rebroadcasting station or in the case of the granting of a second license to an existing private CBC affiliate, the CTV Television Network is prepared to offer the existing licensee "supplementary status" to this Network by which our complete program service would be made available..."(10)

Given the impact of cable penetration and the resulting increase in competition for conventional stations, a major thrust of the Commission's cable television policies is to regulate the industry so as to lessen the financial impact on traditional broadcasters. While cable is the principle means in facilitating increased expnasion of distant and local stations and has significantly contributed to the extension of service objectives, the Commission recognized its impact of weakening the financial base of broadcasters to engage in indigenous programming.

"There is obvious danger that the development and even the policy of broadcasting [could] be determined by the natural tendency of hardware, tools, and machines to proliferate as a result of technological and marketing pressures. Such a proliferation can only occur if the hardware is fed with inexpensive contents. This kind of development leads to a wider and wider circulation of programmes without a corresponding increase in the production of messages. Messages from larger cases are spread more and more distantly. This results inevitably in a stretching process, of "more of the same" process where, in the long run, choice is reduced rather than increased and where the medium is indeed the message."[11]

2.7 Satellite-delivered Communications

Broadcasters utilize various delivery technologies for the distribution of their television services. Over-the-air transmission remains the principal means of initiating distribution of station signals to the viewers. Over-the-air transmissions are intended for general reception by the viewing public. The originating signal is limited however to its Grade B contour of about 60 miles in radius which represents the practical limit of reception for over-the-air transmissions. Cable systems extend this reach of the station's signals by picking up the over-the-air transmissions at headends, then routing those programmed services through their systems to subscribers. Cable provides subscribers with a "clean" or superior "feed" of a variety of local and distant television signals as well as Canadian and foreign-source satellite-delivered specialty services and Pay TV on a discretionary basis, requiring additional fees. Networks make extensive use of long-haul microwave circuits leased from Telecom Canada. Microwave relays are deemed to be private point-to-point transmissions.

Satellite technology is the latest, and in some instances both the most effective and efficient delivery option for television broadcasters and program service providers. Satellites are capable of transmitting voice, data, and video over vast distances, and are essentially insensitive both to distance and terrain. Satellites are, however, subject to interference problems in the lower frequency bands which they share with terrestrial microwave.

As improvements are made to increase the power of retransmissions, to improve channel allocations, and to ensure more accurate positioning and altitude control, the broadcast application of satellites will become more attractive. Satellite facilities provided by Telesat continue to be under-utilized and high development and launch costs, as well as rising insurance costs, will keep the price for the use of satellite services high.(12)

2.8 Telesat Canada: Canada's Stymied Monopoly

The Telesat Canada Act of 1968/69 brought into being Canada's domestic satellite monopoly which provides commercial satellite services "between locations in Canada".(13) Telesat is a part public and part private entity with its equity shareholdings divided exactly equally between the government of Canada and nine publicly and privately held common carriers which provide telephone and other telecommunications services within and between the provinces.

(Teleglobe Canada, entirely owned by the government of Canada, is effectively Canada's international or overseas telecommunications monopoly which also utilizes satellites.)

The half of the equity of Telesat not held by the government of Canada is shared between Bell Canada (operating primarily in Quebec and Ontario), B.C. Telephones, Alberta Government Telephones, Saskatchewan Government Telephones, Manitoba Telecommunications System, Maritime Telephone and Telegraph, Island Telephone (P.E.I.), CN Telecommunications (Nfld. and northern service into the territories), and CN-CP Telecommunications (which operate competitive microwave and other telecommunications services to Telecom Canada, formerly known as the Trans-Canada Telephone System, TCTS.)

All telecommunication tariffs for service extending beyond the confines of a single province, including Telesat's, are subject to approval by the CRTC. Telesat's tariff proposals to the Commission are determined by its board of directors according to their perception of the company's financial requirements.

In addition to their cooperative shareholding in Telesat, Canada's telephone companies have made a staggering investment in cabling their service areas.

Many have also now made substantial investments into fibre-optic technology. The telecos have established very costly microwave circuiting as part of their service facilities. The maximum permissible return on these investments must be realized.

Given the circumstances, it is not surprising that Telesat's tariffs are viewed by many as uncompetitively high in comparison to other methods of delivery of telecommunications and broadcasting services, or when compared to rates offered by U.S. satellite operators in an open and highly competitive marketplace. It should not be surprising either that Canadian telecos use less satellite capacity for the routing of long distance calls and business data than is used by the telecos in the U.S.

These factors help shape the sense that Telesat is Canada's stymied satellite monopoly. However, the company is not only adversely affected by these factors and influences, but is also hamstrung by its own enabling legislation.

Section 5(2), the "Objects of the Company" as set by the Act, requires that Telesat "shall utilize, to the extent practicable and consistent with its commercial nature, Canadian research, design and industrial personnel, technology and facilities in research and development connected with its satellite communications systems and in the design and construction of the systems". While such a pro-Canadian approach can be lauded, it has, according to Telesat management, resulted in an artificial inflation in some significant cost areas of between 30 and 40% of contract worth to facilitate a Canadian re-invention of certain technological wheels.

The legislative arrangement which provided for the telecos' shared ownership in Telesat made provision for special financial support to the company when revenues failed to meet its operating requirements for an accepted 13% rate of return. Structured in a manner similar to a form of transfer payments, these settlements within the years 1983, '84 and '85 have amounted to about $28 million, thus allowing for the agreed average of 13% return on equity in this period. The special provisions for telecos' support to Telesat effectively come to an end in 1987.

Other problems have plagued Telesat, virtually since its inception. The broadcast use of satellite distribution in Canada has been much slower to materialize than had been forecast. This is due, in part, to the comparatively higher cost to use Telesat

facilities than conventional microwave and because of a regulatory breakdown in the licensing of new programming services where it was assumed that satellites would be used to distribute them. The CRTC licensed too many pay television operators at the outset and few could withstand the competition. In the end, most failed and the survivors merged their operations to stay in business. Those entrepreneurs who sought licenses from the Commission to introduce new, satellite-to-cable special-interest programming services on a discretionary basis were fewer in number than had been anticipated. For example, there is no Canadian all-news, satellite-to-cable service.

It takes years to plan, design, build and launch new satellites. Telesat and most other satellite operators in the western world miscalculated future demand and overbuilt, resulting in some of the newest satellites being placed in "parking" or "storage" orbits and, in a current glut of available channels on operating satellites, waiting for paying customers.

At the moment, discounting data transmission application, there are as many as 270 transponder channels among both U.S. and Canadian operational satellites that are either unused or used only occasionally. The 17 operational satellites reviewed include both C band and KU band satellites as well as those which offer both transmission capacities. Of the total of channels available, 22 or almost a full satellite compliment are under the control of Telesat. That does not include Anik C2 or Anik B, both KU band satellites, which are shown currently as offering no video-related capacity.

The surplus availability of satellite channels to serve North America does not seem to provide for an attractive forecast for Telesat. Telesat's situation became so serious that it was obliged to consider selling-off Anik C1 in 1985. No sale of that satellite has yet been realized, but if it were achieved, some $85 million could be expected although only about a $10 million real benefit to Telesat's bottom-line could be expected. The balance of the sale would cover Telesat's financial commitment to that satellite. The likely buyer, if there is one, would be American and a U.S. orbit would need to be secured. Notwithstanding the surplus of channels, Canada does not want to lose its assigned orbit for this or any other satellite.

Telesat's projected revenues and expenses nevertheless forecast a much improved financial position beginning with the current operating year. Its business plan suggests positive earnings above $35

million without a reliance on telecos' settlements in 1985, rising to beyond $60 million in 1987 and showing good return then to the common carrier shareholders. Whether it achieves that goal remains to be seen.

The maintenance of television service to northern and remote communities is encountering difficulties partly because of prevailing Telesat tariffs for the broadcast use of its facilities, and partly because of the authorized tariff governing the provision of service by CANCOM. Northern, remote communities, for example, are paying a disproportionately higher rate for service from CANCOM than is applied or proposed for southern, urban areas taking delivery from CANCOM of "replacement" U.S. signals it makes available.

Telesat's problems are partially and inescapably tied to the present financial and operating position of CANCOM.

2.9 Broadcasting by Satellites

The technological advantage of satellites is its point-to-multipoint transmission capabilities. This allows video signal coverage over a wide expanse of territory. As a result, satellite technology tends to affect traditional patterns of information flow, including conventional television and its associated arrangements. The transition from "land-based" to "spacebound" communications has three potential consequences: 1) it alters the ability of a sovereign state to effectively control the availability of foreign signals in its territory; 2) it distorts the traditional modes of delivery by over-the-air transmitters and microwave transmissions, and 3) it presents new challenges to traditional models of regulatory control and supervision over domestic broadcasting.(14)

There is controversy arising from the impact of broadcasting services distributed by satellites on the Canadian broadcasting system, especially in the maintenance of the objectives of the system as outlined in the beginning of this section. Satellites allow Canadian viewers access to a dramatically increased volume of domestic and foreign television signals and special programming services. Together with the high Canadian cable penetration, most Canadian households now have access to a wide variety of channels available from conventional over-the-air signals as well as from new satellite-to-cable operated services, and direct satellite reception.

A summary of satellite-delivered television services from Canadian and U.S. satellite follows:

2.10 Canadian Television Services Using Satellites

Satellites	Trans.	Active Services
Anik C3 (Ku-117.5°W)	8(W)	Knowledge Network
	9(W)	Access Alberta
	10(W)	Premier Choix/TVEC (west distribution)
	12(W)	Superchannel/ First Choice
	17(E)	Atlantic Satellite Network
	19(E)	Premier Choix/TVEC (east distribution)
	24(E)	La Sette
	26(E)	TVOntario
	31(E)	Superchannel/First Choice (east distribution)
	32(E)	Radio Quebec
Anik C2 (Ku-110°W)		No Video
Anik B (Ku-109°W)		No Video
Anik D (104.5°W)	2	TSN - The Sports Network
	4	Global TV - Occassional Trans.
	6	MuchMusic
	7	CBC - Occassional Trans.

8	CHCH-TV, Hamilton (part of CANCOM pkg.)
9	WDIV-TV, Detroit - NBC Network Affiliate (part of CANCOM pkg.)
10	WXYZ-TV, Detroit - ABC Network Affiliate (part of CANCOM pkg.)
11	CBC Northern Service
14	TCTV, TVA Programming French (part of CANCOM pkg.)
15	CBC French language service
16	CBC Parliamentary Network (French)
17	CBC Occasional Trans.
18	CITV-TV, Edmonton (part of CANCOM pkg.)
19	CBC Northern Service
20	CBMT, Montreal (CBC Network station)
21	WTVS-TV, Detroit - PBS Network Affiliate (part of CANCOM pkg.)
22	CHAN/BCTV, Vancouver (part of CANCOM pkg.)
23	WJBK-TV, Detroit - CBS Network Affiliate (part of CANCOM pkg.)
24	CBC Parliamentary Network (English)

Source: Westsat Communications, October 15, 1985.

2.11 American Television Services Available to Canadians from U.S. Satellites

Satellites	Trans.	Active Services
Hughes Galaxy 1 (134°W)	2	Nashville Network
	3	WGN-TV Chicago (superstation)
	4	Disney Channel (east distribution)
	5	Showtime (east distribution)
	6	SIN (Spanish International)
	7	CNN (Cable News Network)
	8	CNN Headline News
	9	ESPN (Entertainment and Sports Network).
	10	Movie Channel (east distribution)
	11	CBN (Christian Broadcasting)
	12	Home Team Sports
	13	C-Span (Capitol Hill coverage)
	14	Movie Channel (west distribution)
	15	WOR-TV New York (superstation)
	17	PTL (religious)
	18	WTBS-TV Atlanta (superstation)

	19	HBO Cinemax (east distribution)
	20	Galavision (Spanish programming)
	22	Discovery Network (science/nature)
	23	HBO (scrambled as at Jan.15/86)
	24	Disney Channel (west distribution)
RCA Satcom 3R (131°W)	1	Nickelodeon (children's)
	2	PTL (religious)
	3	TBN (Trinity-religious)
	4	FNN (Financial News-part) and Score (sports-part).
	6	SPN (Satellite Program Network)
	8	CBN (religious)
	9	USA Network (general programming)
	10	Showtime (west distribution)
	11	MTV (music)
	13	HBO (scrambled as at Jan.15/86)
	14	CNN (incoming service feeds)

	15	MTV Video Hits (music)
	16	Learning Channel (day) Home Theatre(night)
	17	Lifetime (health and home)
	18	(shared) Reuters/Eternal World/National Jewish
	19	C-Span (Capitol Hill coverage)
	20	Black Entertainment Network
	21	Weather Channel
	23	HBO Cinemax (west distribution)
	24	Arts and Entertainment
RCA Satcom 1R (139°W)	8	NBC (central affiliates feed)
	11	World Television News (London)
AT+T Telstar 303 (128°W)	1	Country Music Television
	2	Selec-TV (pay tv movies)
	18	American Extasy (adult)
	22	KTVT-TV Dallas (superstation)
Westar 5 (123°W)	1	New York Race Tracks (live)
	2	University Network (religious)
	5	Japanese International Network

	20	Santa Anita Horse Racing
	22	Meadows Racing Network (horseracing)
	24	Fantasy Channel (adult)
GTE Spacenet 1 (120°W)	11	Hospital Satellite Network (professional)
	15	American Christian TV (religious)
	21	Baptist TV Network (religious)
Westar 4 (99°W)	15	PBS (part of schedule)
	16	CNN (incoming service feeds)
	17	PBS (part of schedule)
	21	PBS (part of schedule)
	23	PBS (part of schedule)
AT+T Telstar 301 (96°W)	2	CBS (central affiliates feed)
	3	ABC (incoming service feeds)
	4	ABC (ex-Los Angeles service feed)
	6	ABC (inter-network feeds)
	7	CBS (central affiliates feed)
	10	ABC (central affiliates feed)

	12	ABC (central affiliates feed)
	13	Hughes Sports Network
	15	CBS (affiliates feed)
SBS 3 (KU - 95°W)	3	NBC (ex-Los Angeles feed)
	5	NBC (Pacific zone feed)
	6	NBC (central zone feed)
	9	NBC (service feeds)
Westar 3 (91°W)	5	CNN (incoming service feeds)
AT+T Telstar 302 (86°W)	10	ABC (Pacific zone feed)
	11	ABC (sports feeds)
	15	CBS (ex-Los Angeles feed)
	16	CBS (Pacific zone feed)
	17	CBS (duplicate)
	19	CBS (sports feeds)
	20	CBS (central zone feed)
RCA Satcom 4 (83°W)	2	Bravo (performing and cultural arts)
	3	Commerce Satellite (college sports)

4	Nickelodeon (west distribution)
6	Madison Square Garden (sports)
7	World Christian Network (religious)
10	American Movie Classics (old movies)
11	Home Sports Entertainment
12	Playboy Channel (adult)
16	Silent Network (deaf service)
19	WPIX-TV New York (superstation)
21	Nostalgia Channel (old movies)
22	ABC (sports feeds)
23	Odyssey (pop/rock music)

Source: Westsat Communications, October 15, 1985.

In all, there are now 62 unduplicated and different programming services available from U.S. satellites to Canadian viewers having the appropriate receiving equipment. Only one of these, HBO, is fully scrambled at this time although others such as Showtime and the Movie Channel are currently testing and considering the encription of their signals.

2.12 The Impact of the Distribution of Satellite Television Services in Canada

Satellite-delivered television services have had an impact on existing delivery arrangements, and may ultimately have an effect on the Canadian broadcasting system as a whole. Several issues prevail which have

become the focus of division among regulators, broadcasters, cable and satellite service providers.

Among the issues and concerns are:

1) The extent to which the extension of Canadian services furthers the objectives of the Broadcasting Act;

2) The total volume and availability of Canadian programs distributed on the Canadian broadcasting system in an environment of new and evolving technologies;

3) Consumer choice, both in the variety of program offerings and in the availability of programs in different time periods;

4) The implementation of extension of services to northern and remote areas;

5) Removal of present restrictions on the wider distribution of Canadian signals;

6) Increasing access of foreign signals on cable.

1) Extension of Canadian Services and Objectives of The Broadcasting Act: The Broadcasting Act advocates a system whereby its primary function is in the development of programming representing the public and private elements of the system according to its service capacities and objectives. At the same time, the Act states that "all Canadians are entitled to broadcasting service in English and French as public funds become available." Since the introduction of broadcasting in Canada, policy makers have always been concerned that extension of service should not be at the expense of maintaining a predominantly Canadian system.

Under the Board of Broadcast Governors (BBG) broadcasting policy incorporated two major thrusts in regard to the private sector: protection of the private industry so that indigenous programming and extension of service could be undertaken, and Canadian content quotas to ensure such programming would be undertaken. Each of these related principles of broadcast regulation had its genesis with the BBG and provided the cornerstone for broadcast regulation in Canada.(15)

2) Total Volume and Availability of Canadian Programs: Technological change has allowed the entry of many new service providers which increases the prospect for indigenous content derived from a much broader base of supply. In this process established content creators and providors were encouraged to be more innovative and adaptive. It is held that satellite technology can provide new opportunities to create a myriad of new television programming services in Canada which could affect the creation of content/messages. However, these new services must utilize essentially the same resource base which supports all elements of the system. It is worth noting that the resource capacity in Canada is much more limited than it is in the U.S. In fact, the advertising base in the United States is more than nineteen times that of the Canadian advertising market. Many of the predictions and statements made about the impact of new technologies in Canada have been based solely on U.S. experience and data. The differences between the production capacities of the two countries must be carefully considered before such generalizations are made.

3) Consumer Choice: Much of the discussion surrounding the benefits of satellite-delivered services is the potential to expand the range of programming choice. The phrase "narrowcasting" describes the emergence of new general-interest and specialized services designed to appeal to a specific segment of the television audience. The intent of licensing new pay and specialty services in Canada was to allow a new outlet for the Canadian television and film production industry. The amount proposed to be spent for Canadian programming was estimated at the time of the Pay TV hearing at about $200-300 million over five years.(16)

Of all the new services available to the cable subscribers, either from Canada or the U.S., only MuchMusic could be described as a <u>new</u>, narrowly targetted program service; all others are essentially derivatives of the standard network service. Table 2.8 demonstrates the limits in the ability of new programming services to provide narrowly targetted programming to serve the specific tastes of the various segments of the broadcast audience.

According to a study by Joint Communications Corp. commissioned by the Ontario Ministry of Transportation and Communication, the main reason for the large rate of "churn" in the early stages of Pay TV was that the the services repeated its movies too often. Lack of variety was the main cause of a high level of "disconnects". As a result, the ability of Canadian

Pay TV services to provide an attractive range of program options still remains to be seen.

4) Extension of Service to Northern and Remote Areas: The implementation of satellite service to northern and remote areas has raised several concerns over jurisdiction, program exhibition agreements, the need for prior consent, territorial rights, copyrights, and the impact on exhibition creative and performing contracts. A license to serve northern and remote areas of Canada was granted to Canadian Satellite Communications Inc. (CANCOM) in 1981. Approval by the Commission in March of 1983 to distribute four U.S. television signals (WJBK-CBS, WXYZ-ABC, WDIV-NBC and WTVS-PBS, each originating in Detroit) has become the source of tension to players in the broadcasting industry.

The signals delivered by most cable companies are typically those close by and across-border adjacent stations in the U.S. In some cases, the signals of U.S. border stations are trunked by long-haul microwave and subsequently are of lower picture and sound quality than the signals available from satellite. Many cable companies have therefore requested that the U.S. signals tney now distribute be replaced by those from Detroit available from CANCOM. While some extra cost is still involved, the opportunity to replace signals of border stations with those from CANCOM has proved attractive.

One of the issues raised by the importation of U.S. stations into Canada is the affect on the existing practices of purchasing advertising time on Canadian stations. Canadian stations are at a competitive disadvantage with U.S. border stations since more of those stations operate in smaller markets, and they can offer rates that are attractive to Canadian advertisers. In the absence of Bill C-58, a larger share of the Canadian advertising expenditure would be placed with U.S. broadcasters to reach Canadian audiences: the volume and quality of Canadian television service would then decrease.

The Commission takes the position that the CANCOM 3+1 decision actually benefits Canadian broadcasters' interests because the rates charged by those U.S. stations from Detroit are higher than those charged by stations in Canada. In respect of the suggestions that the Commission has effectively licensed three U.S. "superstations" to serve the domestic Canadian market, the CRTC points to the Canadian distribution and availability of the Buffalo stations as being greater than will ever likely be achieved by the Detroit

stations. Detroit is the seventh largest market in the United States and, as Table 2.9 indicates, it has almost 1.650 million households within the domestic reach of its local stations.

Several problems are associated with the conscious selection of U.S. signals from larger American cities for wide distribution in Canada.

- Multi-national advertisers "must buy" the three network-affiliated commercial stations in Detroit. Any extension of the Detroit signals into the Canadian market may obviate any need to purchase time on Canadian stations or networks. According to estimates provided by CANCOM, the combined extra cable and replacement market in Canada total 620,347 subscribers for NBC, 1,023,862 for ABC and 1,323,862 for CBS.

- Audiences may be lost by Canadian television services to the Detroit stations. According to A.C. Nielsen, the replacement of stations from North Dakota with those from Detroit on Saskatchewan cable systems has resulted in an increase in audiences averaged in prime time. Audience shares rose from 13% to 28% in Regina and from 6% to 25% in Saskatoon. Fall reports for Regina and Saskatoon are also included in Table 2.10.

5) Removal of Present Restrictions on the Wider Distribution of Canadian Signals: The Canadian distant signal issue involves the distribution by satellite of local television stations into territories far distant from where the signals originate. This development arose from the Commission's review of the issue as it was outlined in its Public Notice of January 16, 1984:

> "The increasing use of satellites for the delivery of Canadian and foreign programming and the expanding capacity of cable systems to distribute new services offers a means to increase the programming choice available to Canadians. In such an environment, the distribution of existing Canadian signals beyond their licensed service areas may be one of the means to ensure that the broadcasting system, as a whole, remains predominantly Canadian. Subject to being convinced otherwise, the Commission proposes to remove the present restrictions on the wider distribution of Canadian signals, other than in those exceptional cases where

broadcasters can demonstrate consequential damage to their programming capability."

It is important to assess the advantages and consequences of a wider distribution of Canadian signals beyond their original licensed area. While the distribution by satellite of distant Canadian signals would cause a greater use of Telesat's currently unused transponder capacity, it remains to be proven whether those local services can recoup their incremental costs incurred in such extended coverage through additional sources of revenue. Also in question is the extent to which a wider distribution of Canadian signals does allow a greater diversity of Canadian television programming.

Telesat presently offers an unprotected but non-preemptible 6/4 GHz transponder channel at an annual rate of $1,046,076, to which the cost of a necessary uplink, at $155,000 yearly, must be added.* (Telesat is now offering a "seat sale" and provides for a rate deferral program to encourage use of its facilities.) A station seeking extended reach by satellite would therefore have to factor a total space-related expense of about $1.2 million annually, not including discount incentives.

6) Importation of American Pay, Specialty and Superstations on Cable: Canada's cable operators continue to seek access to a wider range of Canadian and American satellite-delivered services to supply to their subscribers, but particularly services originating in the U.S. They point to the growing options in video programming available to Canadians beyond what the Canadian broadcasting system is now able to deliver. The increase in the use of VCRs and cassette rentals, the proliferation of satellite dishes or TVROs and the rapid spread of unlicensed satellite master antenna television systems (SMATV) to receive U.S. signals not authorized for Canadian cable distribution are all cited as the reasons for cable's need for more U.S. satellite-to-cable services. Cable operators fear subscriber "disconnects" due to the prevailing regulatory restrictions which prohibit them from distributing the same U.S. pay and distant signals that are available to Canadians directly from American satellites.

* Private ownership of uplinks is now permitted and users are no longer required to lease only from Telesat.

2.13 Satellites and the Future of Networking: The Potential Impact of DBS Technology

The tradition of television networking in Canada has involved two central, national agencies, CTV and CBC, and a chain of local station affiliates throughout the country upon which the networks depend for the supply of all programming to viewers. That traditional structure is changing and with the advent of direct-to-home satellite delivery may disappear entirely. The CTV Television Network represents the case study in examining this point.

CTV is not a broadcaster. It has no transmission capacities of its own to reach the public. The network depends entirely upon its 21 affiliates and the 251 rebroadcasting transmitters to broadcast its program schedule. CTV provides an average of about 64 hours of programming each week to the affiliates. Its program service is delivered over leased microwave circuits provided by Telecom Canada and CN Communications.

CTV is a unique, co-operative network structure, the only private entity of its kind, in that it owns and operates no stations or transmitters but instead is owned by its 16 principal affiliates on a proportionate basis.

The ownership of CTV[17] is held by some of Canada's largest private broadcasting companies and many of them represent highly diversified activities: Baton Broadcasting (CFTO-TV Toronto and CFQC-TV Saskatoon, and an application pending CRTC approval to acquire CKTV-TV Regina), owned and controlled by the T. Eaton Company family, 20.2% (rising to 24.1% if the bid for Regina is approved); British Columbia Television (CHAN-TV Vancouver and CHEK-TV Victoria), owned and controlled by Western International Communications (Selkirk Communications holds 41% of the shareholding equity in BCTV), 16.0%; CFCF Inc. (CFCF-TV Montreal), owned and controlled by Jean Pouliot and family, 13.8%; Atlantic Television System Ltd. (CJCB-TV Sydney, CJCH-TV Halifax, and CKCW-TV Moncton), owned and controlled by CHUM Ltd., 8.2%; Bushnell Communications (CJOH-TV Ottawa), owned and controlled by Standard Broadcasting (recently acquired by Allan Slaight), 8.1%; CFCN Communications Ltd. (CFCN-TV Calgary), owned and controlled by Maclean Hunter, 7.7%; Sumwapta Broadcasting Company Ltd. (CFRN-TV Edmonton), owned and controlled by Dr. G.R.A. Rice, 7.3%; C.A.P. Communications Ltd. (CKCO-TV Kitchener), owned and controlled by Electrohome Canada, 6.9%; Moffat Communications Ltd. (CKY-TV Winnipeg), owned and

controlled by R.L. Moffat, 4.3%; Harvard Communications Ltd. (CKTV-TV Regina), owned and controlled by Fred Hill and family, 3.9%; Mid-Canada Communications (Canada) Corporation (CICI-TV Sudbury), owned and controlled by Northern Cable Services Ltd. (CUC), 2.0% and Newfoundland Broadcasting Co. Ltd. (CJON-TV St. John's), owned and controlled by Apache International Corp. (Geoff Sterling), 1.6%.

The standard CTV Affiliate Agreement,[18] last filed with the Commission in 1979, states that the network "shall pay to the Full Affiliates a Time Payment, being a percentage of the margin from Network Sales Time, after deducting distribution and program costs and guaranteed Time Payments to Affiliates" and that the percentage "shall be 75% or any other percentage as may be determined by the Directors" and that "each Full Affiliate will be paid its Revenue and Cost Sharing Percentage thereof". The term Full Affiliate refers to the shareholding entities, while Affiliate relates to a class of entity not having a sufficient revenue position to qualify for the full category of relationship. Both categories appear to comprise shareholders of CTV. There is no record on the network's public file with the CRTC that the formula noted above has subsequently been changed by the CTV directors. That formula indicates that the CTV shareholders extract 75% of net revenues derived from what is described as network sales time, CTV's only direct source of income, leaving the balance or 25% of net revenue as the operating fund for the network. Since CTV is a private company, its financial statements are not available for public scrutiny.

The purpose of the following outline of the diversified and often competitive activities of the CTV owner-companies is to focus on the tensions and conflicts of interest which exist, largely because of new technologies, particularly satellites.

With few exceptions, the CTV ownership involves, directly or indirectly, virtually all of the major private companies engaged in broadcasting in Canada. Most of those companies operate both radio and television stations, in many cases in direct competition with each other. Six of those companies hold substantial interests in domestic (and foreign) cable television operations, and three are actively engaged in the use of satellites. To varying degrees, all of those companies have program production facilities which, in addition to their own use and that of the network, are used by contracting private producers (in a few instances currently for CBC productions). At least two of those companies are now

in the business of manufacturing video cassettes of program material for major producing/distributing companies for the retail market. Several have active involvements in printing and publishing.

It is in the area of satellite use where some of the more interesting tensions and conflicts arise within the CTV "family" of owner companies. CHUM, for example, owns and controls two licensed satellite-to-cable "networks": MuchMusic, the national music video specialty service offered on a discretionary basis to subscribers at additional cost and financed in part by revenues derived from the sale of airtime to advertisers, and Atlantic Satellite Network (ASN) which is a free service to cable systems, supported entirely by advertising revenues and offering "third service" throughout the maritime provinces. BCTV and Selkirk are both financial partners in CANCOM, the "sub-carrier" and packager of 16 broadcasting signals which utilizes the satellite facilities of Telesat Canada to distribute nationally, in encrypted form, four Canadian television services and the signals of four U.S. television stations located in Detroit, Michigan. Seven of the eight television signals retransmitted by CANCOM are entirely supported by advertising revenue. The Canadian signals distributed by CANCOM include CHAN-TV Vancouver, a founding affiliate of the CTV Network. CANCOM is licensed as a network, its affiliates being those cable systems, or in some cases, the low-power over-the-air transmission facilities of the affiliates.

J.R. Peters of Vancouver is President of Western International Communications, Chairman of the Board of BCTV, a director and Chairman of the Executive Committee of the CTV Board of Directors, and Chairman of the Board of CANCOM. The CHUM group owns and operates, in addition to its CTV-related affiliated stations, CKVR-TV Barrie, a CBC-affiliated private station distributed in Toronto by cable, and CITY-TV Toronto, a private, independent station. Selkirk, in addition to its holdings in BCTV and its CANCOM equity, owns and operates CHCH-TV Hamilton, also available in the Toronto area off-air and by cable and distributed nationally by CANCOM, and CFAC-TV Calgary, a private, unaffiliated station. The competitive entanglements and conflicts of interest are obvious, but not limited to just these few examples.

In addition to all other aspects, it is the factor of satellites which brings into question the future of networking in Canada. The tradition and evolution of the established television networks was identified in a previous section of this chapter (2.4 at page 34).

Canada's national networks developed from the original licensing of stations, almost automatically in the case of the CBC which was initiated with a national mandate, but by private initiative and somewhat later in the case of CTV. The networks were formed to inter-connect the chain of affiliates, to provide for a national interchange of news and views, and to benefit from the economies of scale in program production and licensing of exhibition rights to other programming.

CBC provides its service through owned and operated stations and through privately owned and operated affilites. CTV, on the other hand, is entirely dependant upon its owner-affiliates and supplementary affiliates to reach the public. While, to greater or lesser degrees, each national network now uses satellites for delivery of programming to their stations and have come to depend on cable as the primary mode of supply of service to viewers, they still rely upon the stations to initiate the transmissions of their broadcasting activites.

The further development of new and different networking arrangements and the impending introduction of direct-to-home satellite service will undoubtedly alter, if not make redundant the traditional concept of conventional television networks. The potential consequences of such a development must be considered.

Within the past few years, several new forms of television networks have evolved. None of them undertake the same structure, performance or contribution as do the established national networks. All of them, in one way or another, threaten the viability of conventional networking.

The first alternative networking arrangement to evolve was the "temporary network", created originally to unite the station facilities in many different locations for the one-time presentation of charitable activities such as fund-raising telethons. That practice was extended to include the regional or national broadcast of lottery results. In each such application, these forms of temporary networks have received the approval of the Commission.

The next stage in the development of temporary networks has proceeded with neither application to nor approval by the CRTC. Certain broadcasting operations, Global in particular, sometimes indirectly, have privately contracted with Telesat and with many of the western independent stations and others for the transmission and subsequent exhibition, either on a live or delayed basis, of selected U.S. regular series

programming, occasional and seasonal sports events such as NFL football games, and for some of the Canadian programming which it originates. From Global's point of view such satellite use is merely a convenient distribution arrangement and does not constitute a network operation requiring the consent of the CRTC. There is no doubt that such an activity is a distribution arrangement, but there is at least reason to question why it should not be properly licensed as a network operation.

The Broadcasting Act defines "network"[19] as meaning "any operation involving two or more broadcasting undertakings whereby control over all or any part of the programs or program schedules of any of the broadcasting undertakings involved in the operation is delegated to a network operator" (emphasis added). The Act defines "temporary network" as meaning "a network operation with respect to a particular program or series of programs extending over a period not exceeding one month".[20]

As noted before, the two national networks have been established, in part, to interconnect the affiliated stations for the purpose of providing programming of general, national interest to the public. To provide for that purpose, almost 90% of the CBC's operating budget is derived from parliamentary appropriations while 100% of CTV's financial requirements are obtained exclusively from the sale of airtime to national advertisers. The evolution of some types of unauthorized temporary networks or other forms of commercial networking can be seen to undermine the economic base and purpose of established national networks. The reason why neither national network undertook to make a distribution of charitable telethons or lottery results which fostered the creation of authorized temporary networks is partly because of the scheduling attitudes at the time and partly because of cost factors. It was held that telethons and lottery broadcasters were not then part of the scheduling philosophies of either network, and those who sought such national opportunities found that in any case there were less expensive alternatives through temporary networks.

It should be noted that the original licensing of both CBC and CTV was not on an exclusive or monopoly basis. While there is an argument, developed elsewhere in this report, that the prevailing economic circumstances in Canada may not support the introduction of a competitive third national network,[21] the Commission has received, and in some cases already approved, considered or gazetted

applications for new local third service in Regina,* Saskatoon, Montreal and Halifax and it is expected that at least one application will be made soon for third service in Ottawa. Third television service is already provided in Vancouver, Edmonton, Calgary, Winnipeg and Toronto. Global announced in 1985 its intention to become a third national service.

It is the impending introduction of direct-to-home satellite service (DBS or DTH) in Canada, however, that is more likely to alter or re-shape the structure and performance of the Canadian broadcasting system, particularly that of the established national networks. With DBS an entirely new concept of networking, the regional or national distribution of programming, would be possible. Instead of relying on affiliated stations to achieve national distribution of service, all network operators could serve Canadian households, directly. What then would happen to affiliated stations, cable systems, the established networks and, in general, television service to the public?

Given the potential for both CBC and CTV to serve the public directly by DBS, and that in virtually every major Canadian location there are both CBC owned and operated stations or private affiliates as well as affiliates to CTV, would prevailing economics support new, private fourth or fifth local services, and would those operations survive?

Given the rapidly descending cost of DBS receiving dishes, and the reduction in the size of the necessary equipment, there could be a dramatic upsurge in the popularity of such an alternative reception method of television programming and services. While the price of DBS reception is decreasing, the costs for cable service continues to increase. If there were "enough" programmed signals available by DBS could cable service withstand the competition? Would cable then be relegated to the provision of only discreet services to the home, such as banking, mailing, shopping, information retrieved, utilities service monitoring and billing, and household security? Is that to be the future of cable in Canada?

Would conventional network services such as are provided by CBC and CTV change with the advent of DBS? CTV could become an 18-hour daily service with no

* As this report is completed, the CRTC is re-hearing the Saskatchewan third service decision under Cabinet directive following an appeal.

dependancy upon affiliates to provide programming within the overall schedule, or for local transmission of the network-supplied portion of the schedule. Under such a hypothetical re-structuring of the network services, the program schedules might be entirely national in scope, devoid of local input. To maintain a local and regional as well as national reflection in their news and information programming, the two established networks would incur substantial new expense in enlarging the scope and nature of their news gathering and dissemination activities. But if CTV had access to the revenue-generating potential of its total program service, with no sharing of it with affiliated stations, such new expenses would be easy to bear. It is difficult to perceive a fundamental change in the overall programming activity of the CBC network as a consequence of the advent of DBS.

In the final analysis, will the implementation of DBS technology improve service to the public? DBS will allow for direct provision of television service to households located in distant, remote parts of Canada where it has not been proven that distribution by any other means than satellite is neither practical nor possible. Moreover, DBS has the very real potential of dramatically lessening the cost to provide such service to those Canadians and to communities in similar situations. As regards improved service by DBS to the majority of Canadians, certain factors need to be taken into account.

From a policy, regulation and general administrative point of view, satellite reception by individuals cannot be controlled. If the household has the right kind of receiving apparatus, all DBS signals, not just those of Canadian origin can be received. If foreign services available by DBS are more numerous and more competitively popular, any Canadian services provided by that means of reception may be overwhelmed and any perceived benefits in these key areas essentially lost. The key in attempting to resolve this related aspect will be the excellence of Canadian programmed services available by DBS. Ultimately, of course, Canada cannot determine for the public whether or not DBS service will be available, except only in domestic terms. Given that DBS will be initiated in the U.S., Canada's choice is either to introduce its own similar service or leave that market to the Americans.

It has been assumed that, in large built-up metropolitan centres in Canada, DBS would not be a pratical means of supply of television service because of line-of-sight and interference problems. That will

apply in some cases and cannot be avoided, but for most Canadians it will not likely be a problem, particularly for those who live in apartment or condominium complexes where "master dishes" could be put to use. The Commission, under the proposed new amendments to the Broadcasting Act set forth in Bill C-20, could exercise control over this aspect of DBS reception.

A move to DBS delivery in Canada could effectively eliminate the benefits and values of the simultaneous program substitution since satellite transmissions, at least in a 6/4 GHz configuration are instantaneously delivered nationally whereas the DBS mode in 14/12 GHz are in regional configuration but will still span more than one time zone in most cases. The probable loss of simultaneous program substitution will occur whether or not Canada moves to DBS, providing the U.S. commercial networks continue their conversion to satellite delivery. Direct satellite reception in any case by-passes cable delivery.

It is not practical to assume that all North American national, commercial television networks will not ultimately move to DBS delivery, if only to augment their services to affiliates and reach areas not otherwise covered. In that event, those DBS signals will be available to all who have the receiving capacity, not just those intended to be served that way. In this regard, it needs to be remembered that CBS, ABC, NBC and CTV, for example, are each dependent on the size of audience their programs attract since they sell those audiences to advertisers. Any means that can increase the reach and a possible increase in audiences will be pursued. The signals of these advertiser-supported services will not likely be scrambled, although that factor cannot be ignored. CBS is now scrambling its satellite-delivered service to protect the interest of affiliates but that is viewed as only an interim development.

Another pressure behind the consideration of the commercial networks to move further into DBS delivery, is coming on two fronts: the first, in the U.S. is an FCC position which permits cable systems to strip-out the vertical blanking interval (VBI) within transmissions used to distribute teletext data or alphanumeric services. As this phase of opportunity to broadcasters becomes a new, potential profit centre, the networks will (if the FCC challenge is unsuccessful) seek to by-pass the "cable problem"; the second is the growing practice of affiliates to opt out of network scheduled programming to present other programming in which the station has the sole revenue-generating potential. The U.S. commercial

networks are experiencing an increasing problem in guaranteeing full and reliable access to all markets for nationally-scheduled commercials and may ultimately be driven to also by-pass the present affiliate structure. It is not yet known how these pressures will govern future developments. The latter problem is also being experienced by CTV, but the CRTC has so far protected broadcasters' use of the VBI in Canada.

The advent of DBS technology in North America is certain to alter and re-shape all broadcasting, but will likely more directly affect the practice of networking, particularly in Canada.

NOTES

1. Robert Babe, Canadian Television Broadcasting, Structure, Performance and Regulation. Economic Council of Canada. Supply and Services Canada, 1979, p.11.

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APPENDICES

TABLE 2.1

Originating stations, by type, network affiliation, and geographic area as of 31 March 1985.

Type and Network Affiliation	GEOGRAPHICAL AREA												
	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	TOTAL
CBCO	3	1	2	1	6	5	2	2	4	2	--	--	28
CBCA	--	--	--	2	6	11	1	3	3	5	--	1	32
Ind.	--	--	--	--	--	3	1	--	3	1	--	--	8
Community	--	--	--	--	1	--	--	--	--	--	--	--	1
Educational	--	--	--	--	1	--	--	--	1	--	--	--	2
Remote Community	--	--	1	--	8	--	--	--	--	--	--	--	9
TVA	--	--	--	--	10	--	--	--	--	--	--	--	10
CTV	3	--	2	1	1	8	1	3	3	2	--	--	24
TVO	--	--	--	--	--	1	--	--	--	--	--	--	1
R.Q.	--	--	--	--	2	--	--	--	--	--	--	--	2
Global	--	--	--	--	--	1	--	--	--	--	--	--	1
CANCOM(1)	3	--	--	3	--	1	88	--	--	--	--	2	98
TOTAL	9	1	5	7	35	30	93	8	15	10	--	3	216

CBCO: CBC-owned and operated station
CBCA: CBC-affiliated station
Global: Global Television Network
TVA: TVA Television Network
CTV: CTV Television Network
Ind: Independent Station
TVO: TVOntario (Ontario Educational Communication Authority)
R.Q.: Radio Quebec (Societe de radio-television du Quebec)

(1) STV/MTV licenses authorized for the distribution of CANCOM and local programming.

Source: CRTC Annual Report 1984-1985

TABLE 2.2

Private Television Broadcasting Profitability

1972-1983

	R.O.I.[1]
1972	N/A
1973	N/A
1974	N/A
1975	36
1976	47
1977	40
1978	47
1979	49
1980	44
1981	46
1982	57
1983	48

(1) R.O.I. is defined as the ratio of Profits Pre-Interest and Taxes to the total of Net Fixed Assets and that portion of Working Capital deemed to earn revenue.

Source: Corporate Analysis Division: CRTC

TABLE 2.3

Television Stations Reporting Profits or Losses

By Group Revenue Size for 1984 and 1983

1984

Group Number	Group Revenue Size	Number of Reporting Units	Profits	Losses
1	$ 0 to 1,500,000	20	14	6
2	1,500,000 to 2,500,000	10	9	1
3	2,500,000 to 7,000,000	25	24	1
4	7,000,000 and over	30	29	1
		85	76	9

1983

Group Number	Group Revenue Size	Number of Reporting Units	Profits	Losses
1	$ 0 to 1,500,000	19	7	12
2	1,500,000 to 2,500,000	5	5	0
3	2,500,000 to 7,000,000	25	22	3
4	7,000,000 and over	30	27	3
		79	61	18

Source: Canadian Association of Broadcasters, Statistics Canada.

TABLE 2.4

Average Station Data - Television

($ Millions)

	1976	1977	1978	1979	1980	1981	1982	1983
Average Station Revenues	4.34	5.09	6.21	6.47	7.49	8.70	10.2	10.5
Index	1.0	1.17	1.43	1.49	1.72	2.00	2.35	2.42
Average Station Expenses	3.22	3.92	4.97	5.16	6.12	7.00	8.26	8.67
Index	1.0	1.22	1.54	1.60	1.90	2.17	2.56	2.69
Average Station Prog.Exp.	1.70	2.12	2.72	2.86	3.40	3.78	4.38	5.02
Index	1.0	1.25	1.60	1.68	2.0	2.22	2.58	2.95
Average Pre-Tax Profit	0.92	0.94	1.24	1.31	1.37	1.70	1.96	1.88
Index	1.0	1.02	1.35	1.43	1.49	1.85	2.13	2.04
CPI	1.0	1.08	1.19	1.29	1.42	1.60	1.77	1.58
Reporting Stations	65	65	65	73	73	75	75	79

Source: Burns Fry Ltd.,
Canadian Association of Broadcasters

TABLE 2.5

Gross Advertising Volume, 1984

	Per Capita Expenditure	Gross Advertising Volume as a % of GNP
Canada	$223	1.33
U.S.A.	$280	1.81

Source: Television Bureau of Canada

TABLE 2.6

Major Media Ratio of U.S.A./Canada Advertising Expenditures, 1984

	U.S.A./Canada
Newspaper	10.9 / 1
Magazine	11.8 / 1
Radio	9.2 / 1
Television including cable	16.2 / 1
Television excluding cable	15.8 / 1
Direct Mail	11.5 / 1
Outdoor	2.0 / 1
TOTAL Population	9.4 / 1
GNP	8.7 / 1

Source: Television Bureau of Canada

TABLE 2.7

Canadian and U.S. Cost Per Thousand Trends

1976-1982

	Canada	U.S.
1976	10.5	3.67
1977	14.9	4.0
1978	15.5	4.58
1979	13.4	5.28
1980	12.3	5.54
1981	14.7	6.50
1982	21.4	6.47

Source: Arthur Donner and Associates; U.S. Nielsen Television Index

TABLE 2.8

Major Cable Discretionary Services in Canada

Pay Services	Program Content
First Choice/Superchannel	Recent Theatrical Releases. Concerts
Specialty Services	
Much Music	Rock Music Videos
The Sports Network	Sports
The Life Channel	Health-oriented Programming
CNN	News
Arts and Entertainment	Arts, Theatre, Concerts
Nashville Network	Country and Western Music
Headline News	News

TABLE 2.9

Top 10 U.S. Markets-Television

1985

Market	ADI TV HOUSEHOLDS Number of TV Homes	% of Total	Number of TV Stations
New York	6,565,700	7.72	20
Los Angeles	4,365,800	5.13	21
Chicago	5,015,600	3.55	18
Philadelphia	2,582,600	2.97	18
San Francisco	2,054,000	2.42	20
Boston	1,943,300	2.28	19
Detroit	1,650,000	1.94	9
Dallas/Ft. Worth	1,506,000	1.77	13
Washington	1,490,000	1.75	15
Cleveland/Akron	1,436,800	1.69	9

Source: Standard and Poor's

TABLE 2.10

Market Shares Before and After CANCOM Replacement

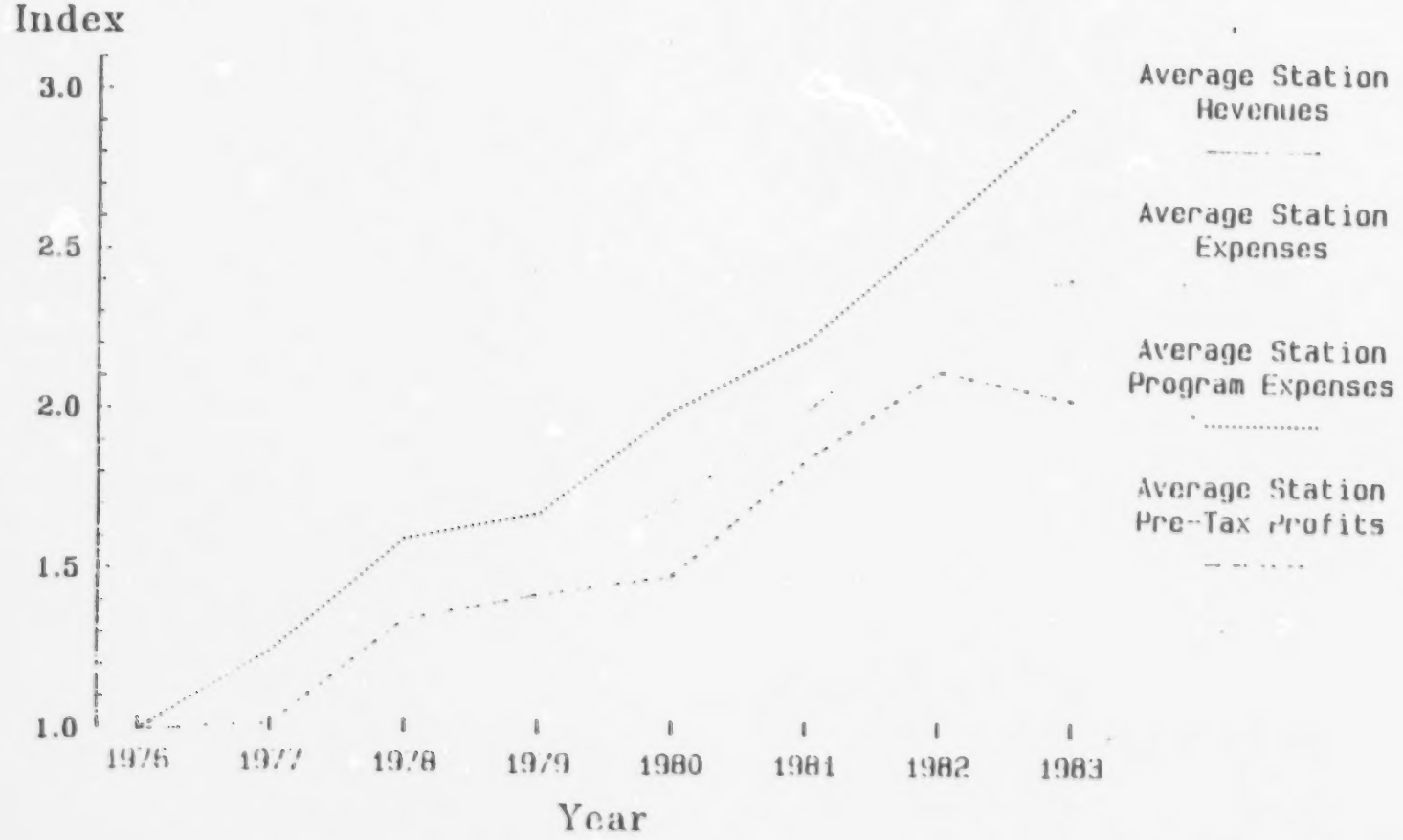
Regina and Saskatoon

	Spring 1984 Rating/Share		Spring 1985 Rating/Share		Difference Rating % / Share %			
REGINA								
CKTV (CTV)	28	49	26	46	-2	- 7.1	-3	- 6.1
CBKT (CBC)	13	23	10	18	-3	- 23.1	-5	- 21.8
CJFB (CBC)	1	1	1	1	-1	-100	-1	-100
CKOS (CBC)	1	2	1	2	N/C	--	N/C	--
N.D./US COMB.	7	13	-	-	-	--	--	--
DET./US COMB.	-	-	17	28	+10	+142.8	+15	+115.4
SASKATOON								
CFQC (CTV)	23	45	24	44	+ 1	+ 4.3	-1	- 2.2
CBKS (CBC)	14	27	14	25	N/C	--	-2	- 7.4
CKBI (CBC)	2	4	2	4	N/C	--	N/C	--
CKSA (CBC)	N/A	-	N/A	-	--	--	--	--
N.D./US COMB.	6	10	-	-	--	--	--	--
DET./US COMB.	-	-	14	25	+ 8	+133.3	+15	+150

Source: A.C. Nielsen Fall Reports

GRAPH 2.1

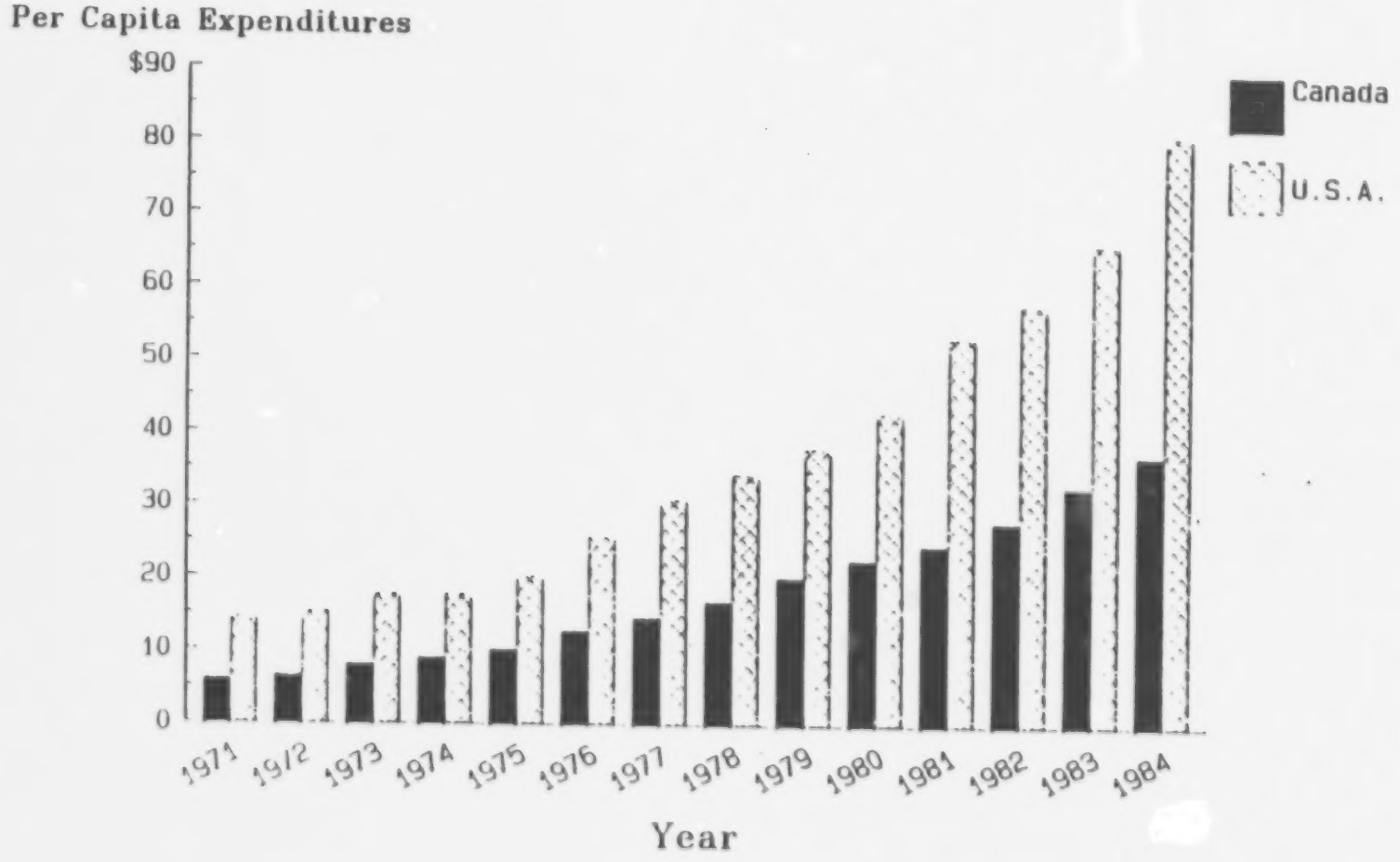
Average Station Performance



Source: Burns Fry Ltd., Canadian Association of Broadcasters

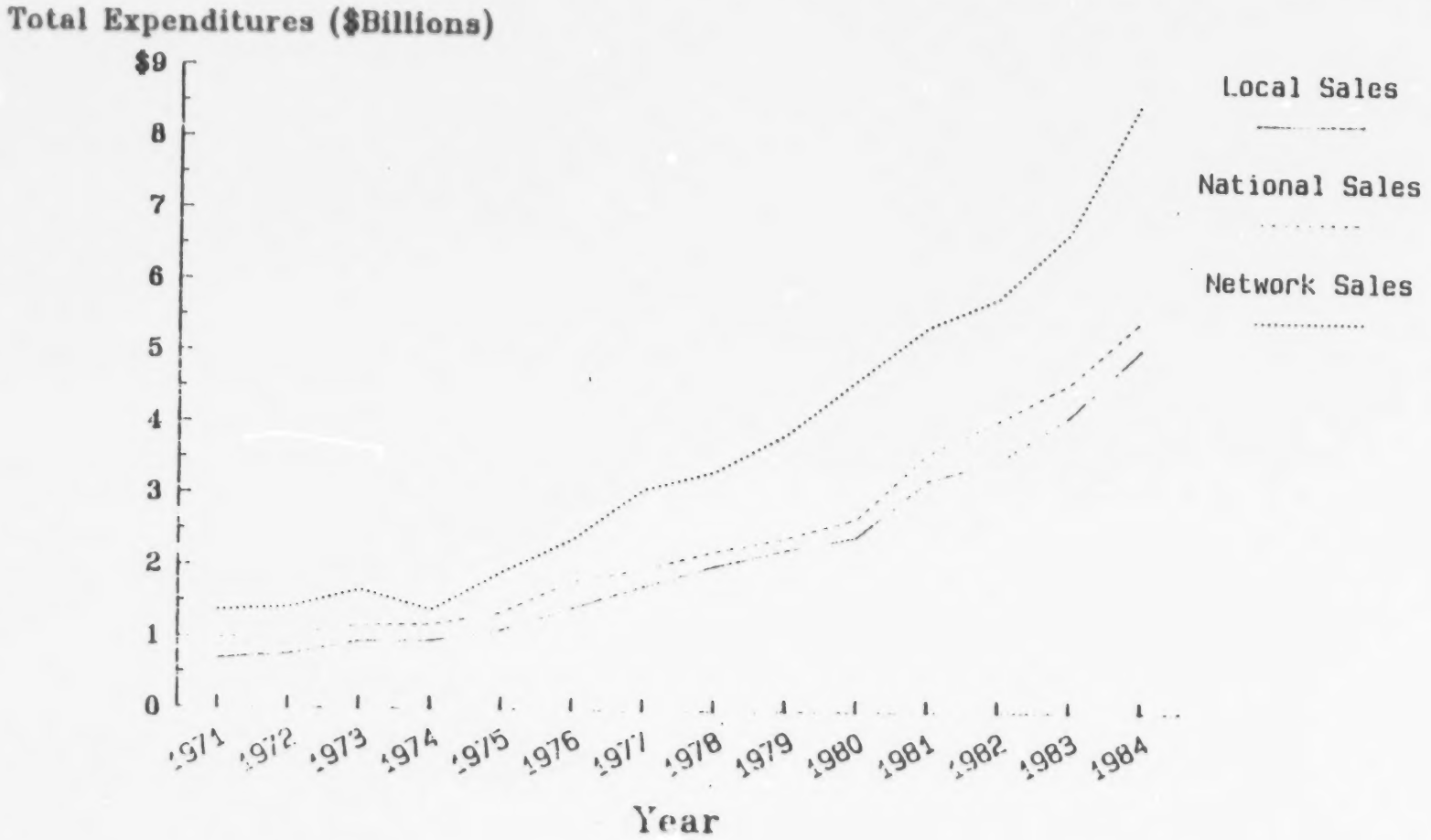
GRAPH 2.2

Per Capita Advertising Expenditures
(Adjusted to constant 1971 $Canadian)



GRAPH 2.3

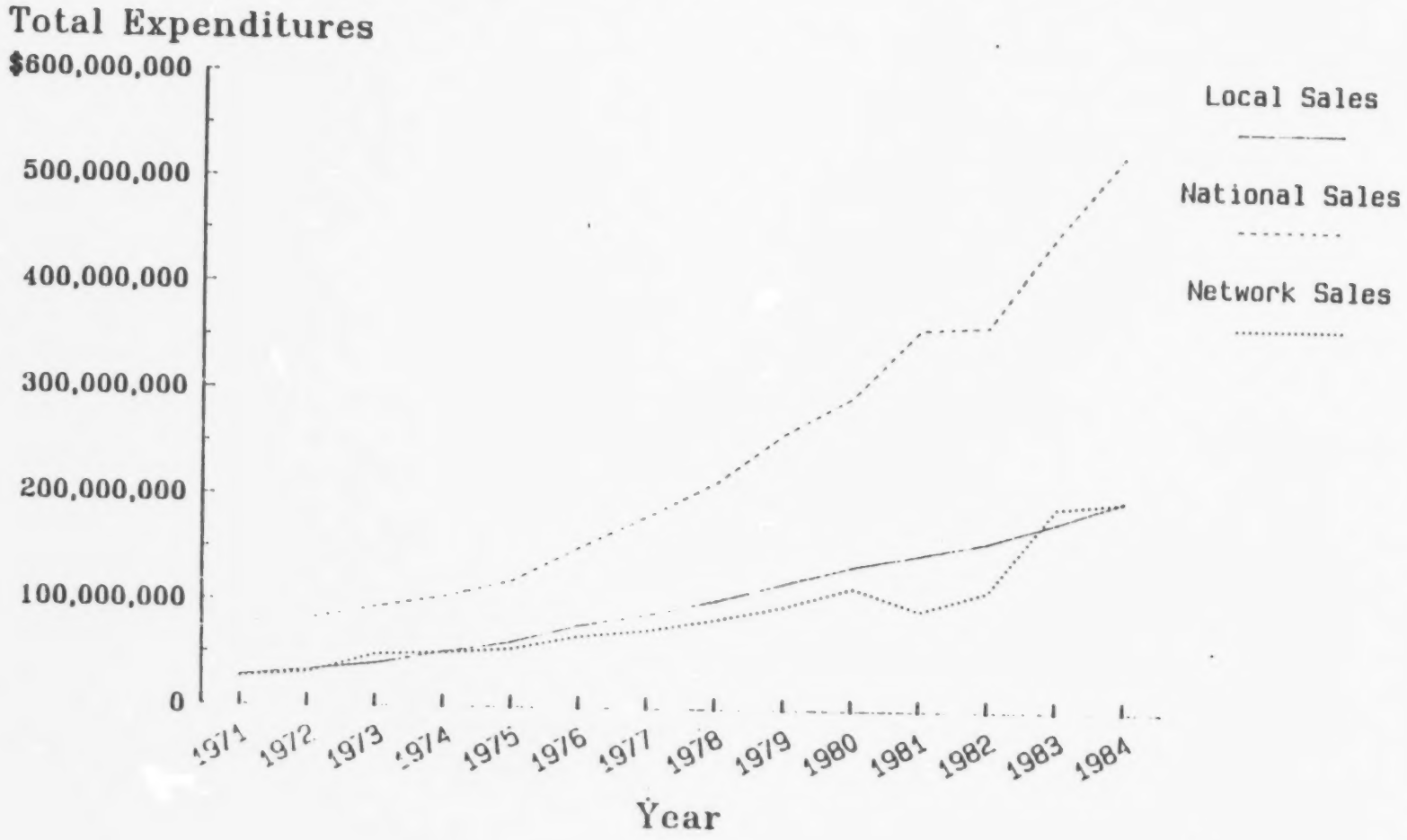
Television Advertising Expenditures – U.S.A.
(Adjusted to constant 1971 $Canadian)



GRAPH 2.4

Television Advertising Expenditures

(Adjusted to constant 1971 $Canadian)



PART THREE

DIRECT-TO-HOME BROADCASTING SATELLITES

3. DIRECT-TO-HOME BROADCASTING SATELLITES

Telesat Canada operates satellites in the 6/4 GHz C-band, the 14/12 GHz Ku-band, and those with a combination of both features. Three satellites have been constructed with exclusive 14/12 GHz capability. These satellites, the Anik C series, permit the introduction in Canada of an interim direct-to-home capability until satellites specifically designed for this purpose became available.[1] The present Anik series has a life span of between seven to ten years. Satellites with full DBS capability are being planned for 1990.

3.1 Individual Reception of Satellite-Delivered Television Signals

Direct broadcast satellites (DBS) will provide delivery of television services intended for direct reception in the home. DBS is designed to work with small size, low cost receiving equipment readily available to the public. DBS is particularly suitable for reception of signals in remote areas where conventional over-the-air, microwave delivery or cable retransmission proves to be unfeasible or uneconomical. As a source of both entertainment and information, DBS is the choice of a growing "backyard earth station movement"[2] which includes those who are subscribers to cable as well as those receiving over-the-air television. It is estimated that there may be as many as 200,000 dishes in use throughout Canada. Most of those TVROs are aligned to receive only American signals available from U.S. satellites.

> The Canadian government has taken the position that an individual's private use of a satellite receiving apparatus, TVRO or "dish", is not an offense to be prosecuted under any existing federal statute. Moreover, no attempt has been made by any Canadian government authority to limit or restrict selectively the sale to or purchase by individuals of satellite receivers, or to in any way influence the alignment of such apparatus as would govern what signals are receivable from what satellites.

3.2 Canadian DBS Satellites

The Anik series satellites currently used by television operators transmit signals not generally intended for reception by the public directly, but for

reception by earth stations at specified points, primarily for cable redistribution. The signals are, in only some cases, redistributed by over-the-air rebroadcast transmitters in scrambled form to subscribers. These service operators utilize the 6/4 GHz band on Anik D. The required TVROs are larger and more costly than those required to receive 14/12 GHz band. Even so, close to 95 percent of the 200,000 Canadian households that have invested in TVRO equipment are capable of receiving only C-band (6/4 GHz) signals.[3] Most U.S. satellite-delivered television services are distributed by C-band satellites.

Only a few programmed services are available on 14/12 GHz satellites. Anik C3, while not technically a direct broadcast satellite, is capable of providing direct-to-home reception to receivers of about 1.2m in diameter. However, the cost for delivering services using the 14/12 GHz satellite is considerably greater than that for the 6/4 GHz satellites. Telesat Canada is, however, proceeding with the introduction of its Direct to Home (DTH) service, scheduled to commence in August of 1986, using its uncommitted Ku-band transponders.

> Developments in U.S. satellite technology require that we co-ordinate our domestic satellite policy and plan for the next generation of satellites to include provision of DBS service in Canada.

3.3 DBS Studies Program

In April, 1981, the Department of Communications undertook an extensive studies program to explore and evaluate all aspects of a possible DBS program in Canada. This was subsequently summarized into a working document which allowed reaction and comment among interested industry groups. There was an apparent lack of consensus, best demonstrated by the diverse opinions about the introduction of an effective DBS service in Canada. These included technology taking precedence over program production, the incompatability between C-band and Ku-band receiving equipment, underutilized Ku-band satellite capacity and the overall expected cost of the service. Developments in U.S. DBS technology and the programming services involved will also have a significant affect upon the ultimate creation of a Canadian-delivered DBS service.

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PART FOUR

CANADIAN SATELLITE COMMUNICATIONS INC.

(CANCOM)

CASE STUDY IN PRIVATE SECTOR SATELLITE DEVELOPMENT

4. CANADIAN SATELLITE COMMUNICATIONS INC. (CANCOM): CASE STUDY IN PRIVATE SECTOR SATELLITE DEVELOPMENT

Canadian Satellite Communications Inc. (CANCOM) is, among other things, a unique entrusting of declared public policy in broadcasting exclusively to a private venture resolution. CANCOM is also Canada's largest undertaking in the utilization of satellite technologies for the extensive distribution of broadcasting signals. Great corporate courage, and perhaps the wisdom of foresight, was exercised in the creation of CANCOM. In several important ways, CANCOM is an experiment and it remains to be seen whether on each or any count it will be successful. The development of the application of satellites for broadcast-related purposes has introduced a range of new problem areas, only a few of which have been dealt with or resolved. Nevertheless, the advent of satellites and their use in distributing television services has opened up the potential for contributions to the public never previously possible or practical. CANCOM is the case study.

4.1 The Evolution of Extension of Television Service in Canada: Re-examining the Logic of Licensing

The Broadcasting Act for Canada declares that all "broadcasting undertakings... constitute a single system, herein referred to as the Canadian broadcasting system, comprising public and private elements". The Act provides to the CRTC the right and obligation to "regulate and supervise all aspects of the Canadian broadcasting system with a view to implementing the broadcasting policy" enunciated in the Act.

The Act defines "broadcasting" as meaning "any radio communication in which the transmissions are intended for direct reception by the general public". As "undertakings", the Act encompasses both transmitting and receiving entities and network operations "located in whole or in part within Canada".

While the Act does not so state it, it is broadly recognized that the Canadian broadcasting system, since its inception, has been made up of television stations and networks to which most of the stations are affiliated, independent, private stations with no network affiliation and, more recently, specialty programming services which, while licensed as networks, do not engage in broadcasting or networking exactly as the Act defines these activities. These latter

entities use no conventional transmitters but rely entirely upon satellites to distribute their services to affiliated cable systems and their subscribers.

Within the context of ensuring an adequate availability of television choice, the Commission has now promoted the creation of Canadian superstations by encouraging broad distribution by satellite of stations originally licensed to serve particular local communities. This extra-territoriality factor, addressed more fully elsewhere in this report, gives cause for a re-examination of the logic of licensing.

Simply stated, the logic of licensing addresses the reason why broadcasting entities are originally issued particular licenses by the Commission. For example, the Act defines "network" as "an operation involving two or more broadcasting undertakings whereby control over all or any part of the programs or program schedules of any of the broadcasting undertakings involved in the operation is delegated to a network operator". The network operation is deemed automatically to provide service in more than two areas. At its inception, the stations which comprised the Canadian broadcasting system were each licensed to provide service to only one area. Over time, however, as the public interest seemed to warrant it, stations achieved extended coverage by way of repeaters or rebroadcasting transmitters.

Similarly, with the advent of cable and its reliance on master antennae receivers or "headends", stations were accorded extended coverage into areas not originally part of their licensed territories of service.

Beginning in the late 60s and continuing through the 70s, four forces were at work driving an overall extension of television service. The first was a response by government and the CRTC to public interest in receiving the second national service, the CTV Network. This resulted in a policy approach whereby, through the private affiliates to CTV, second service has extended to almost every Canadian. The second thrust came when private broadcasters were required as conditions of license imposed by the CRTC to set-up rebroadcasters to serve areas where little or no additional revenues were likely to be derived to off-set the cost. The third was a ready and voluntary undertaking on the part of stations to exploit additional opportunities for service to areas where new revenues were possible through measureable increases in audiences for the programming they provided. The fourth was a reaction on the part of stations to the

announced intentions of other, more distantly located stations, to provide service to areas within the territories of extension which they held to be their own. In addition to this privately financed extension of service, special allocations of public monies were made available to the CBC for its Accelerated Coverage Plan (ACP).

Section 3(e) of the Broadcasting Act states that "all Canadians are entitled to broadcasting service in English and French as public funds become available". Coming before the Act delineates the provisions for the national public service, the CBC, this statement is not taken to apply only to the CBC. There is no record, however, of such public funds being directly applied for the extension of private television service.

In an indirect way, public monies were applied briefly in 1980 to underwrite an interim provision of television service to northern and remote locations. In response to an approach by the Minister of Communications, then Francis Fox, both CTV and the TVA network in Quebec agreed to provide a special arrangement of their program schedules for distribution on the satellite channels assigned for the carriage of the parliamentary proceedings. Each of the networks undertook the costs to re-configure their program schedules and to deliver them to the nearest uplinks. The CBC, which manages the parliamentary channels, provided integration and master control facilities at cost, and the expense of the use of the transponder channels was absorbed by the CBC. CTV and TVA programming, on the English and French channels respectively, was available on weekends and on weekdays when the House was not in session. This interim arrangement began in November of 1980 and continued up to the introduction of CANCOM's service. CTV's estimate of its cost for this special interim service exceeded $800,000.

It should be noted that of the 1,247 television rebroadcasting transmitters now in use for both public and private broadcasting, more than 100 are estimated to be "society" facilities or low-power rebroadcasters established and entirely financed by small communities, not broadcasters, in more remote locations in the provinces and in the territories.

The original extension of service thrust was essentially initiated to bring about complete availability of the two national, English language television network services, CBC and CTV. The private affiliate-owners of the CTV network bore the exclusive financial responsibility for extending CTV service. In

a few instances, CTV affiliates were required by the Commission to pay compensation to other private stations affiliated to the CBC network when CTV service was extended into areas where they had originally held a monopoly of service. The reason given for the requirement of compensation payments was the financial circumstances of the CBC private affiliates in these smaller areas of operation.

The same financial circumstances governed the establishment of "twin-stick" operations, where, in certain small communities, the only local television service was a private affiliate of the CBC that undertook to operate a second transmitter to make CTV network service available. The first such twin-stick operation was in Thunder Bay, with Yorkton, Lloydminster and Sault Ste. Marie following soon after. These operations are dual affiliates to both national networks. The original local station augments the CTV network service of about 64 hours each week with its own programming and that which it licenses and undertakes all of the costs involved in accessing the CTV service and in operating the facility. CTV makes no charge upon supplementary affiliates for the program service or any other attendant expenses, and each twin-stick operator may strip-out and sell the full commercial inventory in most of the CTV programming.

The next phase in the evolution of extension of television service in Canada moved from the limitations of the terrestrial means of distribution of signals to the seemingly limitless potential in the use of satellites to achieve distribution of broadcast services. It had become evident that microwave, requiring line-of-sight "boosters" every 40 miles or so, was not a practical or economic means of extending broadcast service to all areas, and that the economic factors in isolated and remote, small communities could not support the introduction of local broadcasting services. The absence of practical microwave "feeds" precluded the establishment of local cable service in these same areas at that time.

The Therrien Committee Report recommended in 1980 that the CRTC "should immediately call for license applications for the delivery, in remote and underserved areas, of a range of Canadian satellite television services that would be attractive to Canadian audiences".(1) The recommendation was in response to the fact that some Canadians, estimated at about 10% of the total population, did not have what was considered to be enough television choice, if any service at all. Most of these communities are geographically too remote to receive television service

by conventional or landbased means of delivery. Many thousands of Canadians living in areas that cannot be considered geographically remote also remained underserved.

Satellite-delivered television services began in the United States as early as 1975 and new suppliers of programming services quickly took advantage of available satellite capacity. As American service suppliers increased their use of satellite capacity it became necessary to seek a Canadian alternative, for without one, Canadians in remote and underserved areas would continue to seek "to satisfy their needs by the unauthorized reception of broadcast signals from American satellites."(2)

> Satellite technology was considered a viable solution to the disparity of broadcast services which existed in Canada. It was also a response to the perceived threat of unauthorized reception of broadcast signals from American satellites. The Therrien Committee was of the opinion that the extension of broadcast services was not proceeding as quickly as the demands for service in underserved areas was increasing. It was of the opinion that a private sector initiative could fulfill the perceived discrepancy in broadcast service options between urban and remote areas, rather than a new public service commitment.

4.2 The Licensing of Canadian Satellite Communications Inc. (CANCOM)

On April 14, 1981, the CRTC announced that it approved an application by Canadian Satellite Communications Inc. (CANCOM) to operate a network license to carry on a multiple channel television and radio broadcasting television operation via Canadian satellite.(3) In its decision the Commission noted CANCOM's ability to meet the basic objective for the delivery of broadcasting service to remote and underserved communities. CANCOM's approval was predicated on its capability for an early implementation of service to remote and underserved communities, those "that presently receive only two or less signals within 90 days of the date of the decision."(4)

An implicit assumption of the CANCOM proposal was that it was to fulfill the perceived gap in service between urban and remote areas - that it was to be an exclusive Canadian service to northern and remote communities.

CANCOM is a federally incorporated company, originally licensed for the sole purpose of achieving extension of Canadian broadcasting services to remote and underserved communities throughout Canada. It was authorized to offer four Canadian television and eight Canadian radio signals to remote and underserved communities throughout Canada which were able to receive two or less television signals.[5] CANCOM was originally licensed to offer the following services:

Television	Radio
- CHAN-TV (CTV) Vancounver	- Two Indian/Inuit stations
- CITV-TV (IND) Edmonton	- CFQM-FM Montreal
- CHCH-TV (IND) Hamilton	- CKAC-AM Montreal
- TCTV Montreal (a new specially-programmed French language service)	- CITE-AM Montreal
	- CKO-FM Edmonton
	- CIRK-FM Edmonton
	- CFMI-FM Vancouver

Source: Application by Orbital Communications Company of Canada Inc. carrying on business as "CANCOM", 1981.

It commenced test service on July 15th of 1981, originally utilizing Telesat's Anik A[6] to nationally distribute the signals of three existing local television stations. A fourth Canadian television service, TCTV, which is a French-language channel of programming derived from CFTM-TV Montreal and other TVA Network stations in Quebec, was added on November 1.

CANCOM commenced its commercial service to affiliates on January 1, 1982. The CRTC approved the first CANCOM affiliate only in December of 1981, eight months after service was licensed.

Both CANCOM and the Commission had underestimated the time it would take to receive, process and approve applications to locally distribute the signals available from CANCOM. The cashflow projections were therefore incorrect and the company incurred significant early losses against original calculations. The Therrien Committee's prophetic wonderings* were too quickly realized, and CANCOM began to seek important new marketing opportunities to offset its steadily worsening financial situation.

Within the first year of its operations, CANCOM made application to the CRTC for an amendment to its original license in order that it could also distribute four American television signals originating from Detroit, Michigan. Despite the objections of Canada's major broadcasters and others about the creation of foreign superstations to serve the domestic Canadian market, the Commission was moved to accept CANCOM's argument that approval of the proposed amendment to license was essential in order to prevent financial collapse.

Approval was granted in March of 1983 and CANCOM began distributing four U.S. television signals (WJBK-CBS, WXYZ-ABC, WDIV-NBC, and WTVS-PBS, each originating in Detroit) shortly thereafter. The Commission had approved only two signals from Detroit (CBS and PBS affiliated stations) with the other two to come from Seattle, Washington. All four of the U.S. signals distributed by CANCOM continue to originate from Detroit, however. It is the Commission's position that CANCOM's subscriber levels in the west do not now warrant the additional uplinking expense of adding the Seattle signals in place of the two Detroit signals.

Since CANCOM received authority to add the distribution of the four American television signals, (commonly referred to as the 3+1 package) two new marketing opportunities have opened up for it. While it was originally licensed to serve "core markets" (those where two or fewer television signals were available), CANCOM now also serves "extra-cable" (where one or more of the U.S. signals are not otherwise available) and the "replacement" markets (where signal quality of available American signals is deemed deficient and the cable sysem is authorized to replace it or them with those available from CANCOM).

Estimates of its present level of losses range as high as $32 million, yet CANCOM forecasts a break-even

* (see page 5)

plateau on revenues against expenses by the end of 1986.

CANCOM was the product of the imagination and dreams of Rolf Hougen, a pioneering entrepreneur from Whitehorse in the Yukon who sought a means to serve the needs and interests of Canadian viewers in the north and in remote regions. He put together a joint-venture broadcasting consortium from the south, with equal shareholdings of 18% distributed amongst British Columbia Television Ltd., licensee of CHAN and CHEK in that province (both affiliated to the CTV Network); Allarcom Broadcasting Ltd. of Edmonton, licensee of CITV which is an independent station; Selkirk Communications Ltd., licensee of the independent station in Hamilton, CHCH, and Telemedia Ltee. of Montreal which took the responsibility to establish TCTV, the French language television service. Rolf Hougen held 28% of the issued shares.

Over time that fiscal arrangement has changed dramatically with BCTV, in which Selkirk has a substantial interest, rising to an equity position of just over 46%. BCTV is controlled by Western International Communications of Vancouver. The other original broadcast partners have each reduced their shareholdings to 8.07% in favour of BCTV. The company undertook new capital requirements, while reducing to 3.51% Rolf Hougen's involvement and adding about 26% of CANCOM's current equity being held by institutional investors from across Canada.

The licensing of CANCOM to provide a privately funded and operated Canadian-source broadcasting service to northern and remote areas brought into sharp focus an important economic feature of satellite delivery: cost insensitivity to distance. The delivery of television service by way of satellite should, at least in theory, be no more costly in remote areas than anywhere else in the country. Equitable and universal rates should be able to be applied to all subscribers to satellite-delivered services regardless of geographical location. By comparison, the costs for terrestrial microwave are determined incrementally as the distance increases. During a CANCOM-related public hearing in Winnipeg commencing December 3, 1985, the CRTC heard submissions by both the Saskatchewan and Manitoba provincial governments which evidenced that subscribers in the most northerly or remote locations on the prairies were in fact paying considerably more to receive service from CANCOM than the more numerous subscribers to urban cable systems in such centres as Winnipeg.(7) Both governments called upon the Commission to ensure that those subscribers most

needing service from CANCOM in the far north and remote areas could receive it at truly equitable rates.

> The licensing of CANCOM placed the onus on private sector financing; that such an operation must ultimately become self-sustaining. The model of private financing with revenues derived from subscriber payments was thought to be the most viable alternative to direct government subsidy.

4.3 CANCOM, the Three-Plus-One Option and Other Subsequent Amendments

CANCOM's move into the distribution of four U.S. television signals as part of its overall package of service to subscribers arose out of two perceived needs. The first was to meet a rising deficit which imperilled the continuance of the company.(8) The second was to deal with a growing belief that a package of only Canadian signals, even with a relatively high proportion of popular U.S. programming in their schedules, was not sufficiently appealing to off-set the continued spread of private, residential dishes and TVROs serving entire communities in distant, remote and northern areas. In each of those situations the signals being received and the progrmaming being watched were entirely of U.S. origin.

But, from CANCOM's point of view, the driving motivation in seeking to also distribute American television signals was one of simple survival. In retrospect, CANCOM's financial crisis early in 1983 was a product of a combination of circumstances. As things were developing, it became evident that CANCOM had been too optimistic in the setting of its business plan. Expenses proved to be higher than had been anticipated, while cashflow was lower and slower to be realized than had been calculated. Both CANCOM and the Commission had underestimated the time it took to process each application by a potential affiliate. CANCOM's deficit and its attendant financing costs was rising far too quickly. CANCOM subsequently applied for an amendment to its original license which would permit it to distribute the so-called "3+1 package". The CRTC acknowledged CANCOM's financial plight and announced its approval of the amendment on March 8, 1983.

In splitting the supply of U.S. signals between the two distant American cities, Seattle and Detroit, the Commission seemed to have responded to the concerns expressed during the hearing about the artificial

creation of U.S. superstations serving the domestic Canadian market.

Those who oppose or who express concerns about CANCOM's distribution of four U.S. television signals do so for a variety of reasons, but the common link is the foreign superstation factor. Detroit is the seventh largest market area in the United States. As such, it is considered among the "must-buy" markets for national and multi-national advertisers seeking to reach the total American market with their commerical messages. To the extent that, by way of CANCOM, the Canadian viewing audience of the Detroit signals equals or betters their home market results, the superstation status is said to be determined.

Among the particular concerns arising from the creation of foreign superstations is that multi-national advertisers who market common brands in both the U.S. and Canada may be compelled by the facts or simply moved by the opportunity to reduce the domestic purchases of airtime on Canadian television services in some proportion to the "bonus" of Canadian viewers achieved with their buys on the Detroit stations. As stated in its submissions to the CRTC on the matter, more than 80% of the revenue booked each year by the CTV Television Network is, for example, from multi-national advertisers.(9)

Canada's private television sector is entirely dependant upon the revenues derived from the sale of airtime to advertisers. According to the latest available data, Canada's commercial television industry enjoys less than half of the per-capita investment made by advertisers in U.S. television.(10) The anxieties of the private broadcast sector, and others with related concerns, are better appreciated when this factor is taken into account with the added potential of a further reduction in revenues arising from the foreign superstation issue.

In 1984, the CBC, CTV, Canadian Association of Broadcasters, Global, ACTRA, Union des Artistes, Canadian Conference of the Arts, TVOntario and the English and French language producers, participated in a unique joint appeal to the Federal Cabinet seeking a reversal of a CRTC decision which authorized Saskatchewan cable systems to replace the U.S. signals they previously distributed from U.S. border sites with those distributed by CANCOM from Detroit.(11) Cabinet did not concur with the appeal and the decision stood. This "replacement" factor represents a new and obviously valuable market opportunity for CANCOM, but a problem for other interests.

It has become evident that exclusively servicing northern and remote communities has financially limited the ability of CANCOM to fulfill its obligations or meet its revenue expectations under its original license. This raises the question as to the use of private enterprise to achieve broadcasting policy objectives of the government.

4.4 Unauthorized Signal Redistribution: The Issue of Prior Consent or the Right to Deny

Under prevailing Canadian law, a signal that is available from an over-the-air transmitter may with impunity be redistributed, even when payments for reception by such other means is required of subscribers and where the signal originator or other copyright holders to the programming involved derive no share of that revenue nor receive any other form of compensatory payment from such redistribution.

It is interesting to note, however, that the CRTC has on several occasions approached the use of satellites in connection with broadcasting somewhat differently.

In its original CANCOM decision,[12] the Commission stated "that the CANCOM proposal is predicated on the consent of the participating [Canadian] broadcasters for the distribution of their signals" and that such consent represented, "in the Commission's view, the most satisfactory arrangement for the early and uninterrupted implementation of the service".

In a notice preceding the conduct of a public hearing,[13] the Commission stated that "any authorization to distribute a foreign satellite-to-cable programming service will be subject to the expectation that Canadian cable operators enter into the necessary contractual arrangements that might be required to permit its carriage".

The Commission did not take that position when it authorized WTBS-TV (IND) Atlanta, WOR-TV (IND) New York and WGN-TV (IND) Chicago, each of which are declared U.S. "superstations" distributed by American satellite and entirely financed by advertising revenues,[14] as optional foreign signals available for distribution by some Canadian cable systems.

American authorities have taken consistent objection to the "pirating" of U.S. signals by Canadian cable systems and by CANCOM. The American viewpoint on CANCOM was summarized in a recent Forbes Magazine article[15] which pointed out that this "tiny private-sector company... snitches signals from the Detroit stations of the three U.S. networks and the Public Broadcasting System, scrambles the signals to prevent secondary theft and sells the transmissions via satellite to Canadian cable companies, which feed some 885,000 households". Pointing out the difference between American and Canadian copyright law, and the fact that, unlike the U.S., Canada has no Copyright Royalty Tribunal, the article states that this part of the long-standing "border war" is "mostly one of fairness" and that Canadian cable companies "would have paid copyright holders as much as $12 million in compensation this year" if Canada had similar laws in effect. The Forbes article observed that "even the U.S. government seems toothless in dealing with the Canadian problem", and concludes that the battle "illustrates how difficult it is to adapt international law to rapid innovation..." The article also states that none of the "many transborder agreements and international copyright conventions directly prohibits CANCOM's activity simply because Canada is not a signatory to conventions that deal with satellite retransmissions".

One of the agreements between Canada and the United States has, however, been employed by the American authorities to at least deal partly with what they see as the "Canadian problem" in the satellite use for broadcasting. In 1972, and again in 1982,[16] the two nations concluded arrangements in letter form which governed the reception and use of each other's satellite transmissions.

On April 15, 1985, Mark S. Fowler, Chairman of the U.S. Federal Communications Commission (FCC) and David J. Markey, Assistant Secretary of Commerce for Communications and Information, wrote to Andre Bureau, Chairman of the CRTC, registering the American objection to the distribution by CANCOM of the four U.S. signals originating in Detroit. They characterized the Canadian Commission's March 25 decision as opening the way for a widespread Canadian cable retransmission of those signals and that the development was "troubling because it does not fully recognize copyright protection afforded Canadian copyright owners whose material is retransmitted via cable in the United States and the commensurate need to compensate for Canadian use of U.S. programming". The Fowler/Markey letter went on to note: "Particularly

disturbing is the adherence to policies that exclude from Canada, in the name of cultural sovereignty, cable or broadcast programming for which copyright payments would clearly be payable, while simultaneously affirmatively encouraging Canadian distribution of programming for which no compensation is offered." The U.S. letter concluded that "if there is any expectation of a near term change in Canadian copyright law, it might be unwise to cause expectations to be created and investments to be made, where a change in the law may shortly disturb these expectations and investments".

Bureau responded on May 8, 1985, stating that he could assure American interests "that any CRTC policies or decisions which affect U.S. satellite services are consistent with provisions of the 1982 exchange of letters respecting trans-border satellite services" and that all applications "are considered by the Commission in the context of provisions of the existing Canadian copyright legislation" but that when new legislation is enacted, "all Canadian licensees will, of course, be required to comply with its provisions".

Fowler replied to Bureau's letter on August 8, 1985, and noted that the CRTC response did not deal with "the unauthorized and uncompensated retransmission of U.S. originated broadcasts".

Then, on November 27, 1985, the CRTC issued a news release, entitled "Receiving Equipment for Satellite Television Signals: The CRTC Advises Caution", in which the Commission advised the public of certain factors which should be taken into account "before purchasing or leasing equipment for the reception of satellite services". Included were: the access to "American signals not authorized for distribution by the CRTC"; that some of the equipment available "may not have received the necessary approvals" from the DOC; that "legal action may be taken against operators of television rebroadcasting service, leading to the shutdown of their systems and the consequent loss of the consumers investment", but that "private individuals and commercial establishments have been exempt since 1983 from any licensing requirement or restriction on the use of earth stations, provided that the signals received are for private use only and are not redistributed to others".

In an undated December 1985 Fact Sheet issued by the DOC, the department picked-up the theme set earlier by the CRTC and advised the public that it should be "cautious about spending money to purchase or lease equipment intended for the distribution of television programming" but that it did not apply "in cases where

television programming signals are received directly from satellites by individuals for their private use". The DOC release stated that "television programming distribution systems, whether over-the-air or cable systems, require a technical construction and operating certificate issued by the DOC and a broadcasting license issued by the CRTC". The DOC urged "communities or individuals who may be considering setting up or subscribing to such television programming distribution systems to inform themselves about DOC certification and CRTC licensing requirements" and, "before considering any investment in in-home equipment, [they should] satisfy themselves that the system operator - whether an individual, company or community organization - has obtained the required DOC certificate and CRTC license".

While a Canadian parliamentary sub-committee enquiring into the updating of domestic copyright law has now rendered its report (17) and has, among other things recommended the establishment of Canadian cable retransmission payments, it is likely to be up to five years before necessary legislation could be enacted and any such benefits to copyright holders realized. If such relevant changes to existing legislation are enacted, the U.S. would not likely continue its position of "piracy" in regard to Canadian use of American broadcasting signals. A "let's wait and see" attitude does seem to be developing in Washington within some of the concerned bureaucracies.

But the U.S. administration reportedly has already taken steps to deal with the "Canadian problem". The Toronto Star reported on January 9, 1986, in a column by Sid Adilman headed "U.S. denies TV service to Canadians", that the U.S. State Department has moved to prevent Canadian reception of WTBS-TV Atlanta, one of the three declared U.S. superstations distributed by American satellites. Reason given for the action was that Canada "does not force Canadian cable TV operators to pay copyright fees for American channels they now pick up free". The article goes on to state that "American pressure on copyright is a key issue in the run-up to free trade negotiations..." but that "for technical reasons, the State Department cannot prevent Canadian cable companies from importing signals" of U.S. stations along the Canadian border that use conventional over-the-air transmitters, "but because WTBS must be picked up from an international satellite, the State Department has jurisdiction".

While the U.S. State Department may be able to prevent Turner Broadcasting, which operates WTBS, from entering into any agreements in Canada for the cable

distribution of that signal, it is not possible for the American administration to directly prevent Canadian reception of the signal until and unless the signal is scrambled.

These developments do, however, highlight the urgent need for a complete overhaul of Canadian copyright law to address the issue of cable retransmission of signals received from satellites, as well as the appropriateness of redistributors obtaining prior consent of signal originators and of the right of signal originators to deny such redistribution by satellite.

Not only would such measures serve to address the interim situation until Canadian copyright law is sufficiently revised, but by applying the proposition of consent and the right to deny redistribution, the territorial rights in contracts and the recognition of copyrights would be protected.

Prior consent to satellite redistribution and the right of signal originators to deny such an extension of service must be provided for.

4.5 Problems Related to Copyright and Contractual Rights In the Broadcast Application of Satellites

Some of the difficulties associated with the application of satellites for broadcast-related purposes have been identified in the previous section of this chapter, but because this area of interest is so large, so complex, and potentially so troubling it requires a fuller examination.

Canadian and American interests concerned about the distribution of broadcasting signals by way of satellite express their worries on two fronts: copyright and contractual rights. The first falls within the pervue of established public law, while the second is in relation to business arrangements expressed in the form of contracts.

Within the context of copyright law, it has already been observed that Canadian statutes date back to 1924 and while that ancient legislation is now undergoing rigorous up-dating, it remains significantly at odds with U.S. legislation dealing with intellectual property or copyright in connection with signal retransmission by satellites and/or via cable systems. The difference between the two national approaches to copyright is so significant, at least to the Americans,

that U.S. officials are now pointing out that of all developed nations, Canada's copyright law is the most out of date to theirs and that they have a better deal in place with South Korea, a country where they have greater overall concerns in respect to copyright and other communications-related areas.

The American interests, of course, are centered on the use of U.S. signals and programs by Canadian cable systems in general and by CANCOM in particular. It would be unfortunate, however, to view the importance of the concern only from a foreign interest or perspective. The concern over the absence of signal retransmission rights is just as significantly a Canadian issue with equal or stronger concerns on the part of domestic interests.

Standard clauses exist in almost all licensing agreements or contracts with Canadian television broadcasters for the exhibition of U.S. programs which expressly prohibit the encoding of the signal and the subsequent "sale" to subscribers.(18) Yet that is exactly the practice engaged in by CANCOM for the distribution of both the Canadian and American signals in its service package.

Some years ago, while resolving labour disputes with American performing and creative contributors, U.S. program producers entered into revised contracts whereby ancillary uses of program productions, such as for videocassettes or Pay TV exhibition, would require a share by "points" or percentages of incomes which might be derived from such additional use of the programs. The test applied in regard to a Pay TV use was whether or not the signal containing the program would be scrambled in delivery to the household as a means to ensure and protect revenues and to avoid "pirating." The argument has therefore been made that the scrambling of the signals distributed by CANCOM via satellite would breach or trigger such contract clauses even though no payments were receivable by the signal originators and therefore no such revenues were received by the program producers.

While American satellite-to-cable Pay TV services, such as Home Box Office, have now commenced the scrambling of their signals distributed by U.S. satellites,(19) Canadian and American households equipped to receive satellite transmissions have been able (and still are for all remaining unscrambled services) to receive such discretionary services with no payment made to the originators.

From the copyright point of view, the holders of the intellectual rights involved have not authorized CANCOM to make a redistribution of their works, and therefore contend that it constitutes "piracy".

As was indicated earlier in this report, there is a fundamental disagreement between Canada and the United States as to what extent, if any, the letters of agreement of 1982 have on the reception and use of each other satellite transmissions of broadcast-related services. The U.S. administration takes the position that, for example, American signals originating in Detroit cannot be uplinked and nationally distributed in encoded form by CANCOM on Canadian satellite when special charges resulting in unshared revenues are made for the ultimate clear reception of those signals.(20) On behalf of the Canadian position, not otherwise addressed by any other competent authority, the CRTC states that the practice is in accord both with Canadian law and the 1982 letters of agreement.(21)

Existing Canadian law holds that any signal receivable over-the-air and generally intended for public use may be re-distributed by a Canadian cable system, even when a subscription fee is required for reception by that means, and that the cable system is not required to make any form of payment to the signal originator or to the persons who hold the copyright in the programs or "works" so redistributed. It follows then that no consent is required of the signal originators and that those parties now have no right to deny such redistribution.

Under relevant U.S. copyright law, while no consent or denial feature is extant, cable systems which engage in the retransmission of signals and the programming they entail are obliged to make a form of payment into a Copyright Royalty Tribunal, but only in regard to the redistibution of distant signals. In recent years, while the U.S. has continued to press for an equal approach in Canada, the CRT has been under attack and revision and it is now in some doubt as to whether that approach to cable retransmission rights and payments will continue in such a form. The formula approach now engaged in the U.S. benefits, at least to some limited extent, Canadian as well as American interests.

It would be ironic if the revised Canadian copyright law adopts, as(22) the Parliamentary Sub-Committee has recommended, a form of cable retransmission right and it were to come into force as the U.S. authorities wound-down their own approach.

If the concerns over copyright in respect of redistribution by satellite and by cable of broadcast-related signals were resolved not by copyright law but by contractual law, the feature of consent and/or denial on the part of the signal originator should be required. By such an approach, a signal originator, operating on his own behalf and as an agent on behalf of those holding applicable rights to other programming in his schedule could deny retransmission or redistribution of his signal, thereby limiting distribution and uncompensated extented use. In the alternative, the signal originator could consent to such additional use and in the process enter into an agreement through contractual arrangement whereby the necessary compensation could be determined. Under such an approach, the required compensation would likely be set following an undertaking with the other rightsholders involved.

While it was stated earlier that existing Canadian copyright law does not apply to the retransmission by cable of a broadcasting signal receivable off-air, it is held that the law nevertheless does accord protection to the programming contained in the signals as being cinematographic or audiovisual works and, as well, extends to such elements as film script or music used in program production. In that regard, however, it is worth noting that while Canada is a signator to two international copyright conventions, the Berne and Universal copyright conventions, it is not a party to the so-called Rome Convention to which the U.S. is a signator. Neither Canada or the U.S. have signed the Satellite Convention of Brussels of 1974.

The Berne Convention (1928, 1971),[23] provides to authors of literary and artistic works the exclusive right to authorize the broadcasting of their works or the communicating of such works to the public by any other means. The national signatories determine for themselves, through legislation, the conditions under which such rights are to be exercised.

The Universal Convention (Paris, 1971),[24] accords to authors the exclusive right to authorize any public performance or broadcast of their works. Exceptions may be made to the right by any signatory providing they do not conflict with the spirit and intent of the convention and that a reasonable degree of effective protection is accorded.

It is not certain that the Berne Convention applies to communication by satellite, and the Universal Convention does not provide for the right in

broadcasting in the 1952 text, the only form of that international agreement to which Canada has become a party.

The Satellite Convention (Brussels, 1974),[25] to which neither Canada nor the U.S. are signators, requires of each party that "adequate measures [be taken] to prevent the distribution on or from its territory of any programming-carrying signal by any distributor for whom the signal emitted to or passing through the satellite is not intended". Direct reception of satellite signals, where it is the intention by the originating party that the general public be served, is not covered by the Satellite Convention. To date, only seven nations have signed this treaty and it is therefore not now in force.

Canada's existing copyright law (1924),[26] provides protection for original literary, artistic, dramatic and musical works, in addition to its provisions which accord protection to the cinematographic productions and sound records referred to earlier. However, in the case between Canadian Admiral vs. Rediffusion of 1954,[27] the court held that a cable company was not conducting a public performance when it retransmitted a television signal which had been received from an over-the-air transmitter.

Notwithstanding that 32 year old development, the currently applicable definition of "radio communication", the term embodied in the Copyright Act without amplification, is: "any transmission, emission or reception of signs, signals, writing, images, sounds or intelligence of any nature by means of electro-magnetic waves of frequencies lower than 3,000 Gigacycles per second propagated in space without artificial guide" (Radio Act and Interpretation Act of 1970). It is held that broadcast-related transmissions from satellites fall within that definition.

However, in a subsequent action, CAPAC vs. CTV of 1968,[28] the Supreme Court of Canada held that the right of radio communication should be interpreted as the exclusive right to authorize a public performance or representation by radio broadcasting.

The Broadcasting Act defines "broadcasting" as meaning "any radio communication in which the transmissions are intended for direct reception by the general public".

It remains questionable whether copyright liability attaches to the satellite transmissions of

television programming where it is intended to be received directly through use of a TVRO or "dish". It is held that the use of satellites for point-to-point program distribution does not constitute a public performance by broadcasting. When satellites are used to retransmit local broadcast signals to distant locations, such as the case with CANCOM, the programming involved is, under Canadian law, not deemed to be performed in public or to be broadcast directly to the public.

As satellites become the distributing means for a greater volume of broadcast-related purposes, the courts will likely be required to re-examine the questions related to public performance, when radio communication occurs and when "broadcasting" is involved.

In a 1985 paper entitled "Satellite Communications and Copyright Law", written by J. Fraser Mann and Gary A. Maavara[29] of the Toronto law firm of Borden and Elliot, from which much of this section is drawn, they note that the courts may have to consider in particular whether the unauthorized interception of satellite-transmitted programming would result in such transmissions coming within the scope of the existing Copyright Act even if they are primarily intended only for authorized broadcasters or cable systems.

In an article for Broadcaster Magazine[30] in 1983, John Hylton, Q.C. (and J. Fraser Mann), also of the Toronto law firm of Borden and Elliot, observed that international conventions and existing domestic laws, particularly in Canada, appear inadequate to deal with the satellite uses of copyright works. To address and hopefully remedy the situation, they suggested a number of avenues of approach, among them: that copyright owners should be entitled to be reimbursed for any electronic dissemination of their works according to the actual reach of the audience receiving such works. Authorization of such owners or rightsholders should be necessary in the case of the distribution by satellite of their works; copyright owners should not, however, be entitled to duplicate remuneration in respect of the communication of their works to a single audience; a satellite carrier which is not itself transmitting directly to the public, and whose activities are limited solely to providing signals for public distribution by cable or by broadcast stations, should not be liable for copyright infringement provided the authorization of copyright owners has been obtained, and, if satellites are used to deliver off-air broadcast signals to distant cable systems, the liability of both carrier and cable

systems must take into account such regulations as priority of carriage. They conclude that it "would be preferable to rely on copyright laws as a means of enabling rightsholders to control the communication of their works to the public, rather than on strict regulatory controls..."

In its October, 1985 report of the Parliamentary Sub-Committee on the Revision of Copyright, it was recommended that a "retransmission right should be provided to Canadian copyright owners and to foreigners on a reciprocal basis". There was no specification of the details and mechanisms to be employed regarding such a retransmission right. The hope is that whatever system is ultimately adopted, it should be simple and mutually beneficial to all rightsholders, domestic and foreign. Of all of its many recommendations, however, this was the only one which addressed directly the satellite use for broadcasting purposes, but it was clearly the most important matter to be resolved. Its impact would be upon all forms of retransmission, including satellites and cable. Most observers believe it will be up to five years before Canada's present Copyright Act is revised and there is no certainty that the retransmission right will actually be part of the new legislation.

There is now movement in Canada, however slow, on the copyright front. The law will be changed. But what about the contractual front? Since CANCOM began operations, not a single allegation of liability in breach of contract (or any copyright-related matter) has in fact been processed to a conclusion in the courts of Canada. There have been a number of cases regarding the jurisdiction and authority of the CRTC in satellite-related issues, but none touching copyright or contractual right to date.

4.6 Territorial Rights for Program Distribution: Simultaneous Program Substitution and Non-Simultaneous Program Deletion

One of the earliest problems encountered in the use of satellites to redistribute and extend coverage of conventional, over-the-air broadcasting services was the intrusion of signals into areas of exhibition where the rights to certain programs were held by other broadcasters. While it has proved to be an inescapable problem for stations affiliated to the same network service, it also affects the distribution of other programming by those same affiliates and by other independent stations.

While conventional terrestrial transmitters can and do span provincial boundaries in Canada, satellite "footprints" can and do span different time zones. Therefore, when distant Canadian or American signals are re-distributed by satellite, the benefits to be realized from the CRTC's cable policy for simultaneous program substitution are compromised in some cases. The Commission's regulation requires that when identical programs are simulcast in the same territory, the local originating station may require the distributing cable system to substitute its play of that program on any other channel assigned to a distant signal offering the same program.

The regulation was introduced by the Commission primarily to protect the licensing of exclusive exhibition rights to programs within the schedules of local television stations and the revenues derived from the commercials within them. Signals received from satellite and distributed by a cable system may originate from a Canadian or an American station located in a different time zone. As a consequence, commonly scheduled programs may be made available in a local area at times before or after they are scheduled by a local station. In such cases, non-simultaneous program exhibition will occur and simultaneous program substitution cannot occur. The Commission's cable regulations do not provide for non-simultaneous program substitution, even though the local station would, in all cases, continue to hold the contractual rights with the program distributor for the exclusive exhibition of the program in his schedule within his territory of service.

At the early stages of the introduction of the CANCOM service, when the distant signal factor first became apparent, the Commission introduced a special condition of license to CANCOM affiliates intending to distribute the signal of CHAN-TV (CTV) Vancouver in areas already served by another affiliate to the same network.(31) This condition was in addition to and different than the simultaneous program substitution regulation for cable but was also predicated upon a recognition of the need to protect the licensing rights for the exclusive exhibition of programs both of domestic and foreign origin; and to protect the commercial revenues obtained from the sale of advertising time within such programming. This special condition has been consistently applied by the CRTC in all similar cases.

The condition requires that all programming material supplied to CTV affiliates by the network be stripped-out of the CHAN-TV signal by all local CANCOM

affiliates wherever that programming is available in the area from another CTV affiliate. The condition makes no distinction between programming that would be simultaneously scheduled and programming that is not scheduled at the same time, and it is important to note that the condition does not require or speak of substitution, only deletion.

All of the independent television stations in Canada, as well as those private stations affiliated to both the CBC and CTV national networks, schedule some of the same Canadian and foreign programs, over and above the common programs that may be part of network schedules. The exhibition rights to such programs are licensed on a "selective" basis from the distributor and almost always engage an exclusivity clause for each particular market. The absence or unavailability of the exclusive exhibition right usually precludes the acquisition of the program by the local station.

Distribution of television signals by satellite, particularly those of domestic origin, will make difficult the maintenance of exclusive territorial rights to programming. While a remedy exists with the distributor of programs by not entering into exhibition agreements with stations whose signals are given extended coverage by satellites, another remedy rests with the CRTC and is available to the Commission by a precedent of its own creation. In order to sustain equitably throughout the Canadian broadcasting system, the CRTC can extend the application of the special CTV-related CANCOM condition to local distributors of all distant signals, and all programming in common with that within the schedules of the local stations would then be deleted when not in simulcast, and substituted whenever common local clock-time simulcast occurs.

While blanks, "blacks" or holes would then occur within the schedules of distant signals locally distributed (as they do now where the special CANCOM condition applies), the local stations' right to exclusive program exhibition would be retained and any threats to their economic viability arising from a loss of advertising revenues would be reduced.

Exhibition contracts held by a local station, or by the network to which it may be affiliated, prohibit the opportunity to substitute in non-simultaneous circumstances since to do so would entail a premature second play of the same program or episode of a series. Except for multiple-play conditions of scheduling for the stripping of programs in syndication after their initial network release, all other programming is, by sub-contracts with performers, directors and others,

customarily limited to only two plays or exhibitions within a 12-month period of time. Payments to performers and other contributors, such as writers, are predicated on only two conventional television exposures within a year. Additional exposures by the same exhibitor can entail or trigger additional payments to the same creative and other production contributors.

4.7 Maintaining the Provision of Indigenous Local Service

Local broadcasting service is the foundation of the Canadian system. All that is in place today evolved from the original provision of local radio and television service. In many small communities the station may be the only local media outlet. In such locations, there may be no local, daily or weekly newspaper, no movie house and rarely a theatre where touring companies give live performances.

Local broadcasting in small communities is also at the end of the economic chain of the system, drawing upon the smallest local resource and enjoying the least amount of regional or national advertising revenue support. Yet it is from these same small, Canadian centres that some of the demand for additional service originates. The key question is whether these small, local broadcasting operations can survive the competition from additional service to the viewers and listeners.

While we seek to balance and make more equitable the provision of broadcasting service to all Canadians, regardless of where they live, we also need to preserve and to maintain the provision of indigenous local service. That may be the greatest challenge for the Task Force. It is certainly the greatest risk for the system, and those Canadians which these small, local operations serve.

Using satellites to provide broadcasting services where it otherwise does not exist is a commitment that must be fulfilled. Using the same method of distribution to introduce new signals where local service is already provided is quite another matter and must be approached with great care.

While we live and work within an open and democratic society where free enterprise is a basic tenet, we have also learned to respect the laws of marketplace economics and in that context we have

gained an appreciation of certain limits to competition.

Canada has in place several somewhat unique forms of monopoly enterprise. Telesat is our only satellite agency, and cable licenses are granted on the basis of one territory, one service. Each of those monopoly undertakings has its own forms of indirect competition. Telesat vies with the other half of its ownership, the telecos, for a share of the total telecommunications business and seeks to market its advantages over their microwave highways. The competition to cable comes primarily from the use by individual households and housing complexes of satellite dishes for direct reception. To a lesser but rapidly growing degree, cable competition is also developing from the use of videocassette players in the home.

Telesat deals with its indirect competition by improving its service, seeking competitive tariffs and looking to new avenues of opportunity such as direct-to-home broadcasting, DBS or DTH. Cable, on the other hand, looks to the carriage of more Canadian and U.S. programming services that it can additionally sell to subscribers as its primary move to counter the competition it is experiencing.

Taken in combination, satellites and cable represent the greatest threat to the continuing viability of indigenous local broadcasting service. If the local market factors will support it, most local broadcasters would rather compete head-on with another new local station playing by the same rules.

Small market-size communities, as the financial reports dealt with earlier attest, are the most tenuous, volatile and vulnerable for local broadcasting. All of the radio and television stations shown in the latest available StatsCan tables as being in deficit positions are services located in such small communities.

While, in general, it is not the responsibility of the government or the CRTC to "bail-out" failing broadcasters who miscalculated their risks or over-stated their promises of performance, it surely must be their responsibility not to foster or to introduce by way of policy or licensing action, at least without a great deal of thought and planning, factors which will undermine the viability of the established components of the system.

In 1975, when the Commission reversed its long-standing position and sanctioned the use of

long-haul microwave to service cable systems far distant from convenient, conventional head-ends, some existing local television service was sacrificed.

Prior to the importation by microwave of four distant signals into cable systems serving such communities as Sudbury, North Bay and Timmins, the area was well served by two private television undertakings, each affiliated to one of the two national networks, CBC and CTV. Not long afer these cable systems were serviced by long-haul microwave, both the private television operations experienced financial difficulties serious enough to bring about the sale of both properties to the same company that owned and operated both the cable systems and the microwave link. Since then, and for valid economies in operation, both services have been merged into a single operation and the overall local programming contributions previously made have been reduced. Local subscribers got an increase in choice but at the expense of local service to all of the residents in the area.

4.8 The Evolving Position of the Commission

Within a span of less than 13 years, the CRTC has changed its position regarding the use of satellites within the Canadian broadcasting system. The CRTC moved from a position of protecting local services from the incursions of the importation of distant signals to a position which promoted increased programming choice as a means of ensuring that the system remained predominantly Canadian.

The Commission sustained its concerns on behalf of local services right up to the fall of 1983 but then, just 14 months later, reversed itself and began to respond to the arguments supporting an overall increase in signal choice, if not real viewing choice.

1971

In its Annual Report for the operating year 1970/71, the Commission stated:

> "The purpose and mandate of the CRTC is to uphold the public interest and to safeguard the system which provides the best service to the largest number of Canadians...
>
> "The effect of cable television in making available the signals of distant... stations is to fragment the audience of the locally licensed station(s)... [resulting] in diminished revenue...

"The Commission is convinced that the unregulated distribution of distant signals could impair the licensing policy of the Canadian broadcasting system, as established under the Broadcasting Act..."

1979

In its comprehensive publication "Special Report on Broadcasting in Canada: 1968-78", the Commission, following an extensive review concluded that:

"The importation of existing [stations/signals] in markets where they are not currently available will significantly fragment the audiences of existing Canadian stations in these markets".

Then, in its "Review of Certain Cable Television Programming Issues" of March 26, 1979, the Commission stated that:

"Audiences are better served by local than by distant television stations because local stations alone produce local-interest programming of relevance to the community served...

"... given the priorities established under the Broadcasting Act, it is the Commission's opinion that the universal unrestricted authorization for the carriage of distant Canadian stations is not justified..."

1983

In its Public Notice 1983-245 of October 26, 1983 on "Cable Television Service Tiering and Universal Pay Television Service", the Commission observed that:

"While the increased number of programming services [distributed by cable] may provide more diversity, they may also result in audience fragmentation which could threaten the continued development of local broadcasting, particularly in small to medium size markets. Notwithstanding the demand for more choice in programming, the Commission must ensure that the viability of local broadcasting service is maintained...

"Some [participants in the tiering hearing] proposed that cable be permitted to carry, on a discretionary basis, the Canadian signals included in the CANCOM package and other signals from Canadian conventional stations as they become available by satellite. This proposal raises

significant issues relating to the development of Canadian superstations.

The Commission does not intend, therefore, to adopt this proposal at this time..."

1984

In its Public Notice 1984-13 of January 16, 1984, the Commission stated:

"The increasing use of satellites for the delivery of Canadian and foreign programming and the expanding capacity of cable systems to distribute new services offers the means to increase the programming choice available to Canadians. In such an environment, the distribution of existing Canadian signals beyond their licensed service areas may be one of the means to ensure that the broadcasting system, as a whole, remains predominantly Canadian...

"... subject to being convinced otherwise [the Commission intends to] remove present restrictions [governing cable] and to permit the distribution of existing Canadian signals beyond their licensed service areas..."

There are reasons to question, however, whether the Commission's present course of action will result in an increase in real programming choice through the promotion of expanded signal diversity and, more significantly, whether indigenous local broadcasting services, especially those in small markets, can withstand the new competition that the Commission's new position fosters.

NOTES:

1. The 1980's A Decade of Diversity, A Report of the Committees on Extension of Services on Broadcasting Satellites and Pay-TV. Ottawa, Supply and Services Canada, 1980, p.3.

2. Ibid, p.1.

3. Decision CRTC 81-252 of May 14, 1981, p.1.

4. Ibid, p.2.

5. Application by Orbital Communications Company of Canada Inc., carrying on business as "CANCOM" for a license to provide Television and Radio Broadcasting by Satellite, p.2.

6. CANCOM now employs Anik D-1 transponders for the national distribution of its service package. Ground receive facilities are the same as were needed to receive transmissions from Anik A.

7. General Presentation by Honourable J. Gray, Saskatchewan Minister of Justice, Minister of Communications to the Canadian Radio-Television and Telecommunications Commission, Winnipeg, December, 1985.

8. Comparative Analysis of Original Financial Projections and Results. Canadian Satellite Communications Inc.

9. Belanger Chabot and Associates, Financial Outlook for Private Canadian Television Stations. 1980, Appendix 8.

10. See Graph 2.2, Section 2.

11. Governor-in-Council, Petition of the Canadian Association of Broadcasters (CAB), The CTV Television Network (CTV), Le Reseau de Television TVA Inc. (TVA) and the Canadian Broadcasting Corporation (CBC), October 23, 1984.

12. CRTC Decision 81-252 of May 14, 1981.

13. CRTC Public Notice 83-244 of October 26, 1983.

14. CRTC Public Notice 1985-72 of April 4, 1985.

15. Forbes Magazine. September 23, 1985: "If you can't trust friends..."

16. Letters of exchange dated November 6, 1972 and August 24, 1982.

17. Report of Parliament Sub-Committee on Copyright Law Review, October 10, 1985, p.78-83.

18. Intervention by The CTV Television Network pertaining to Extension of Porgramming Service, January 23, 1981.

19. HBO announcement, January 15, 1986.

20. Letters of Exchange between the Chairman of the Federal Communications Commission and the Chairman of the Canadian Radio-Television and Telecommunications Commission.

21. Ibid.

22. Charter of Rights for Creators. October, 1985.

23. Article 11, Berne Convention, 1971.

24. Article IV, Universal Copyright Convention, 1971.

25. Article 2, Satellite Convention, May 24, 1974.

26. The Canadian Copyright Act. R.S.C. 1970, c.C-30. (1924).

27. [1954] Ex. C.R. 382.

28. [1968] S.C.R. 676.

29. J. Fraser Mann and Gary A. Maavara, Satellite Communications and Copyright Law. Satellite User's Conference, 1984.

30. International Copyright Law Agreements and the Need for a New Legal Framework. Broadcaster Magazine, August, 1983.

31. CRTC Decision 81-252 of May 14, 1981.

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Campbell, Murray "Satellite firm puts Motown in Moose Jaw" Globe and Mail. December 23, 1985.

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Decision CRTC 1983-126. Distribution of four U.S. television stations.

Decision CRTC 1984-915. Approval of the carriage of Detroit signals by CANCOM to replace North Dakota signals.

Governor in Council. Petition of the Canadian Association of Broadcasters (CAB), The CTV Television Network Ltd. (CTV) Le Reseau de Television TVA Inc. (TVA) and the Canadian Broadcasting Corporation (CBC), October 23, 1984.

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The Costs of Choice. Task Force on Access to Television in Underserved Communities, CRTC, February, 1985.

PART FIVE

CHANNEL DIVERSITY VS. PROGRAMMING CHOICE:

THE MEDIUM OR THE MESSAGE

5. CHANNEL DIVERSITY VS. PROGRAMMING CHOICE: THE MEDIUM OR THE MESSAGE?

Because of their ability to span great distance, satellites are being used to supply television service to remote and unserved or underserved locations throughout Canada. Because of their capacity to deliver picture-perfect signals, satellites are now also the preferred long-distance carrier of television programming over conventional microwave. Because of their potential for operating cost efficiencies, as well as their other benefits, satellites are becoming the distributor of choice for most purveyors of programmed services.

For industrial, political and social/cultural objectives, satellites have also become the chosen instrument for Canadian public policy to balance the availability of television service more equitably to all Canadians. For its part, the Commission regards the use of satellites for broadcasting-related applications as the means to address the needs of the viewing public for expanded choice, and to meet the demands of the cable sector for more product.

Satellites have become an integral part of the Canadian broadcasting system. They are becoming the primary supplier of product to the Canadian cable industry, and in terms of the public's expectation represent the most likely source of expanded viewing choice. But channel diversity does not axiomatically bring with it enhanced programming choice. We should not be preoccupied with the medium at the expense of the message.

Our system of stations, networks and special program service originators is dependant upon transmitters, microwave links, satellites and cable to effect availability of the programming to Canadians. But the system the Act describes is one of programming, not of technology, and the goals and objectives set for the system can only be achieved by the programming it provides and not by its means of distribution.

It is generally accepted that the public will determine, directly or indirectly, the range and scope of the television services that are provided. The public exercises its determination in a number of ways: first, by turning the television set on or off; second, by selecting the program to be watched from what is available at the time of viewing; third, by being able to and electing to subscribe to a cable delivery service in order to expand the choice beyond what is locally available off-air; fourth, by then opting to

take additional, tiered and/or discretionary services which may also be available through cable subscription at additional cost; fifth, by seeking further expanded viewing choice through the use of videocassette recorder/players and the rental or purchase of programming on cassette, and, sixth, in more limited instances, by the acquisition of satellite receiving dishes to access the available unscrambled television signals from domestic and foreign satellites.

While the government by policy and the Commission by regulation exercise their authorities to control to some extent what Canadian television services can be provided, what mix of programming they can offer, and what domestic and foreign television signals may be distributed by Canadian cable systems, they cannot otherwise control the public's determination as to what programs will be watched or by what means the programs will be received.

The Broadcasting Act acknowledges the right of Canadians to receive television programs, "subject only to generally applicable statutes and regulations". For good and sufficient reason, the Act does not accord an unfettered freedom to receive programs.

5.1 The Limits to Choice in Television Programming

Many factors govern the limit of choice in television programming available to Canadian viewers. These factors include location, economics, policies, regulations, availability of and operating restraints pertaining to assignable frequencies, channel capacity on cable systems, the number of reserved orbital parking spots and, of course, the inclination of viewers and the amount of time they devote to watching programs.

Where Canadians reside is the first determinant in the limits to choice. Those who are located in large, urban areas have access to a greater volume of television signals and programming choice than those living in smaller communities, particularly when the households are situated in the more distant or remote regions of the country.

Economics, however, is the prime factor governing choice in television programming. It determines the amount of funding for the CBC and other forms of public broadcasting and therefore what they are able to do and what they can offer; it determines whether an existing private service can expand its program offerings, or

whether a new service can be initiated; it determines what distribution method can be employed, including the establishment of a cable system and its size of operation; it determines whether service can be extended, by any means, to areas unserved or underserved, and it determines the capacity of individual households to afford access to expanded choice in viewing.

The policies of the governments, in particular the federal government, which in large measure governs all broadcasting activity in Canada, also have an impact upon the limits to choice in television programming. According to their inclination and resource, for example, the governments can provide additional funds to the CBC and other public broadcasters to expand and extend their services; they can support the provision of television service to remote, distant locations; the federal government can open-up opportunities for the introduction of new forms of special-interest programming services, and it can also relax or make more onerous its requirements or expectations for such aspects as the Canadian content of domestic television services. Federal government policies can, in accord with existing international treaties or other undertakings, also have some affect upon the authorized domestic redistribution of foreign television signals.

While the federal government awaits the power to issue binding policy directives to the Commission in regard to its exercise of regulatory jurisdiction, by amendment through Bill C-20, the CRTC generally conforms to revised or new public policies where they do not impinge upon its present independence of action. In every other respect, the CRTC executes its mandate in accordance with the general policy requirements of the Broadcasting Act. There are, however, broad areas of interpretation and discretion given to the Commission in the Act for its supervision and regulation of the Canadian broadcasting system. Guided by existing policy, some of which it now tends to establish for itself, the CRTC directly determines the limits to choice in television programming. It does this through its power to issue, renew, amend, suspend or revoke licenses, together with its companion power to attach special conditions to particular licenses and, most especially, through its television and cable regulations. Through these powers, the Commission determines the number of television stations permitted to operate in a given market and the number of signals that local cable systems may distribute. It also authorizes what new special programming services may be introduced on a satellite-to-cable basis and in that same context determines the number of and balance

between domestic and foreign conventional signals and satellite-delivered television services carried by Canadian cable systems.

Conventional television stations, those utilizing over-the-air transmitters to serve the viewing public, are dependant upon and thereby limited to the number of available, assignable broadcasting frequencies and the permissible power of the transmission on that frequency in the particular market area. The power associated to the transmission on the assigned frequency determines the extent or range of coverage of the station's signal. The assignment of frequencies and the transmission power associated to them are governed by international treaties designed to protect the fair use of broadcasting opportunities and to control interference in signal reception. The amount of spectrum space assigned for television broadcasting is restricted to within the VHF and UHF bands, for all practical purposes limiting to eight the number of local stations possible in Canada's largest markets. Rather than representing an expandable or increasing resource that could accommodate an improvement in the volume of possible services, spectrum allocation for television broadcasting in Canada, at least in the UHF band, has been compacted and subjected to a reduction to facilitate the increasing demands in the U.S. and Canada for access to frequencies for more land and marine mobile radio services. It is the responsibility of the Department of Communications to determine the assignment of broadcasting frequencies, the power of tranmissions, the specifications of technical equipment, and in all other respects the general use of Canada's allocation of broadcasting spectrum. Broadcasting licenses issued by the CRTC are subject to the technical certification of the Department.

Cable is the fastest growing component of the Canadian broadcasting system, even though about 65% of all households already subscribe. Cable has been declared by both the government and the Commission to be the chosen instrument for delivery of expanded viewer choice in this decade. While its growth in basic subscriptions has slowed as the practical saturation point is neared, cable is still able to expand its operating and revenue position through the provision of additional services at extra cost to subscribers. Yet, in some respects, it is cable's own plant that limits the provision of added viewing choice. Estimates prepared by the Canadian Cable Television Association (CCTA), which represents the majority of systems throughout the country, show that about 80% of all cable operations have the capacity at present to add only two or three new channels of

service. To provide for greater expansion in alternative viewing choices, these systems will be required to make substantial investments in expanding their plant capacity. Most of the cable systems with limited expansion capacity are located within areas of service with relatively small populations and limited resource and, ironically, where there are demands for increased viewing choice. Since economic factors govern the number of local stations in the market, cable systems now rely almost exclusively upon satellites as the supplier of additional services.

Satellites also represent a chosen instrument for supply of expanded viewing choice but, unlike cable, the problem at the moment is not a capacity limitation. The problem is a shortage of service suppliers. Canada is assigned only a limited number of parking spots in space for geostationary orbital positioning. At the moment, Telesat operates only three satellites applied for the redistribution of broadcasting signals and the distribution of cable-delivered services. There are 22 transponder channels available for lease and no lineup of potential customers. It is expected that there may be as many as three new Canadian satellite-to-cable services seeking approval by the CRTC to initiate their operations within the next two years. Given the economic track record of some of the specialty services now operating, the proposed new services may end up only replacing those that will have failed. In appraising the potential for other new broadcast customers for Telesat, only CTV remains as the most likely addition but its use of satellites would not expand the presently available roster of choice in alternative viewing.

In the final analysis, no matter how wide and diverse the choice in available alternatives may be, it all comes down to the inclination of viewers and the amount of time they devote to watching television programming. On average, Canadians spend about 23 hours each week watching television. There has been no significant increase in the average of weekly viewing time in the last ten years, despite the fact that the number of available choices in viewing opportunities has almost doubled.

5.2 Diversity vs. Choice

A.C. Nielsen is one of the best known and most widely relied upon television audience measurement companies serving the broadcasting and advertising industries. In North American terms, its reports are regarded as the essential working tool for television.

Those reports routinely assist if not govern the setting and revision of program schedules and the placement of advertising messages with the medium.

The company's chairman and chief executive officer, A.C. Nielsen Jr. reported to the U.S. Advertising Research Foundation on September 16, 1982 on the "Outlook for Electronic Media". Much of that address and the accompanying visuals dealt with the subject of channel diversity in contrast to programming choice. That factor is central to a full appreciation of the application of satellites in conjunction to television broadcasting.

Nielsen's report to the ARF focussed on this question: "... to what extent do people view all of [the] additional choices?"

To get to the Nielsen answer, he reviewed the real growth in choice in the United States. He observed that in 1950, America was served by a total of only 98 television stations, but by 1982 the number of stations exceeded 1,000. In 1960 just over 600 cable systems served the entire U.S., but by 1982 more than 6,000 systems were franchised. The average of available choices in viewing to Americans in 1950 worked out at 3.8 channels, but by 1982 the available alternative sources averaged 9.2 channels. At that point, 24% of all homes in the U.S. could receive 12 or more choices in viewing.

When the Nielsen study tracked actual usage of available channels of choice, the results proved quite surprising. At the earliest point, when the average availability was 3.8 channels, Americans were actually viewing only 2.6 or 72% of availability. When available choice exceeded 9 alternatives, usage dropped to 54% or just over 5. When Nielsen probed cable-subscribing households where 30 channels were available, the study showed usage of only one-third of all that was offered or only about 8 channels.

"In short", he concluded, "even though the number of channels viewed increases as the number... receivable goes up, it does so at a much lower rate. Obviously, there comes a point when the viewer finds it difficult to utilize any additional channel choices." (see Exhibits 1 to 3)

The factor of diversity vs. choice can also be examined from another perspective: whether increasing the number of available television services will actually improve the range of real choice in viewing.

Satellites together with cable systems are expected to be the suppliers of additional choice in viewing. For most Canadians, however, that will not likely be the result. While there has been a recent and dramatic increase in the provision of special-interest, satellite-to-cable television programming services (there are now at least 38 available from American and Canadian satellites) the dominant preference of viewers continues to be the general interest programs offered by the established national networks. The most recent audience reports show conventional, broad-appeal network programs holding about 62% of total average viewing in prime time.

About 65% of all Canadian households now subscribe to basic cable service with an average of at least six conventional channels and three discretionary services available. Only some 22% of cable-supplied households subscribe at additional cost to one or more of the offered pay and special-interest programming services. The cost in relation to the degree of interest and affordability is the determining factor. Under prevailing circumstances, only 17% of all Canadian households have opted to expand their available choices in television viewing, usually to meet special interests.

It should also be observed, however, that as many as 200,000 Canadian households are estimated to have invested in satellite receiving dishes, used mostly to receive American services, and it is also estimated that more than 30% of all homes are now equipped with videocassette player/recorders. The most popular satellite services are said to be those that offer movies and sports, and most VCR usage is for the in-home viewing of feature films and for time-shifting through recording of conventional television programming to achieve later, more convenient viewing. Yet for the vast majority of Canadian viewers, conventional television services originating from over-the-air transmitters remain the primary source for movies and sports programming watched in the home.

Most cable-subscribing households in Canada are equipped with added-on or built-in converters to the home television receiver which allow the reception of more than the 12 basic channels of service. In Toronto, for example, subscribers have access to 16 television station signals (not including pay or other discretionary services). By just the number count alone it could be assumed that a combination of diversity and choice is achieved. But the number of signals in relation to real choice is deceptive.

By receiving just three signals (CBC, CTV and either CHCH or Global) more than 85% of the prime time schedules of ABC, NBC and CBS will be available. For all practical purposes the choice between six is now reduced to three. Of the 16 station signals available, two are each affiliates to the CTV network service and three distribute the CBC program schedule. At the level of nine signals, overall real choice is actually limited again to three. The remaining seven signals include the CBC French language service; CFMT, the multi-lingual station; the PBS affiliate from Buffalo; TVOntario; an independent station from Buffalo; CITY, and either Global, or CHCH. Discounting the more limited interest in the two stations offering other language programming, the majority of full-service English language subscribers in Toronto end up with a real choice of seven alternative channels among the 16 that are available to them. It is the duplication of programming factor that primarily determines the real choice from among all available signals in the Toronto market.

5.3 Using Satellites to Increase Diversity of Service and Viewer Choice

As indicated in the previous sections of this chapter, there are a number of factors which limit diversity and choice in television viewing in Canada. These factors particularly limit the number of local, over-the-air television stations that can be provided within a community. Unless this situation changes, by the licensing of new relatively low power and low cost local stations, it follows that cable, together with satellites, represent the most likely sources of supply of expanded diversity and choice in viewing for most Canadians. Since it is demonstrated that cable also evidences limitations in its capacity to expand service to subscribers, governed by many of the same factors, it falls to satellites to be a key provider of tomorrow's greater choice in television viewing.

In the preceding sections, however, it has been evidenced that satellite operators throughout North America, including Telesat, now have surplus of unused capacity. While it is estimated that there are now more than 38 special-interest, satellite-to-cable programming services available unscrambled from U.S. and Canadian satellites, two additional factors limit the ultimate prospect for maintaining that level of choice or reasonably expecting the present volume of alternative viewing options to further expand: the first would be a lack of support by viewers and subscribers; the second would be an unwillingness on

the part of advertisers to spend much more than at present.

At least 26 of the 38 special-interest services now available from Canadian and U.S. satellites are predicated on subscriber revenues as their only source of funding, or as a major source of financing their operations. As the use of household dishes continues to expand and the incidence of pirating those signals increases, more and more of the services will follow the HBO/Cinemax and CANCOM lead and encode or scramble their satellite transmissions. While that move will effectively eliminate the problem of pirating, the related high costs necessary to scramble signals may also effectively reduce further the present level of choice in viewing supplied by satellites.

The expense related to scrambling satellite signals is literally an up and down cost factor. Not only does the uplink of the signal need to be scrambled, but to accommodate reception all downlinks must be provided with the necessary de-scrambling equipment. In CANCOM's case, for example, its 1985 annual report shows an investment in decoders of more than $10.5 million and an expense of almost $177 thousand in encryption and decryption operating equipment.

According to Satellite News, January 13, 1986, no less than 17 satellite-to-cable services of the 26 referred to above have committed to scrambling their satellite transmissions within this year. Among those services now scrambling or about to scramble are HBO/Cinemax, Showtime/The Movie Channel, WOR-TV New York, a superstation, Ted Turner's Cable News Network (CNN) and Headline News services, the U.S.A. Network, Music TV, Nickelodeon, The Disney Channel, and Lifetime. Even the Christian Broadcast Network which solicits donations will scramble its satellite signal this year as will CBS "to protect affiliates from audience fallout". (refer to Exhibits 4 and 5)

It is interesting to note that the move towards the scrambling of satellite-delivered television signals has provoked an organized compaign by dish suppliers and dish owners in Canada and the U.S. either to stop or slow-down the action or to at least determine equitable rates to lease or practical costs to acquire descrambling equipment. Not all signal originators intending to scramble have yet set prices, but, according to Exhibit 5.5, one supplier of decoders indicates the purchase price will be about $395.00 in the U.S. Exhibit 5.4 indicates the leasing cost will

likely be in the range of $12.95 a month by HBO to a high of $25.00 monthly for CNN.

Since the inception of satellite-to-cable services in 1979, no less than seven Canadian and U.S. operations, including Pay TV services, have failed or have merged and the accumulated losses have been estimated at more than $600 million to date. Moreover, of the 38 special-interest services referred to earlier, only a handful and most notably HBO have recorded profits or reached a break-even point.

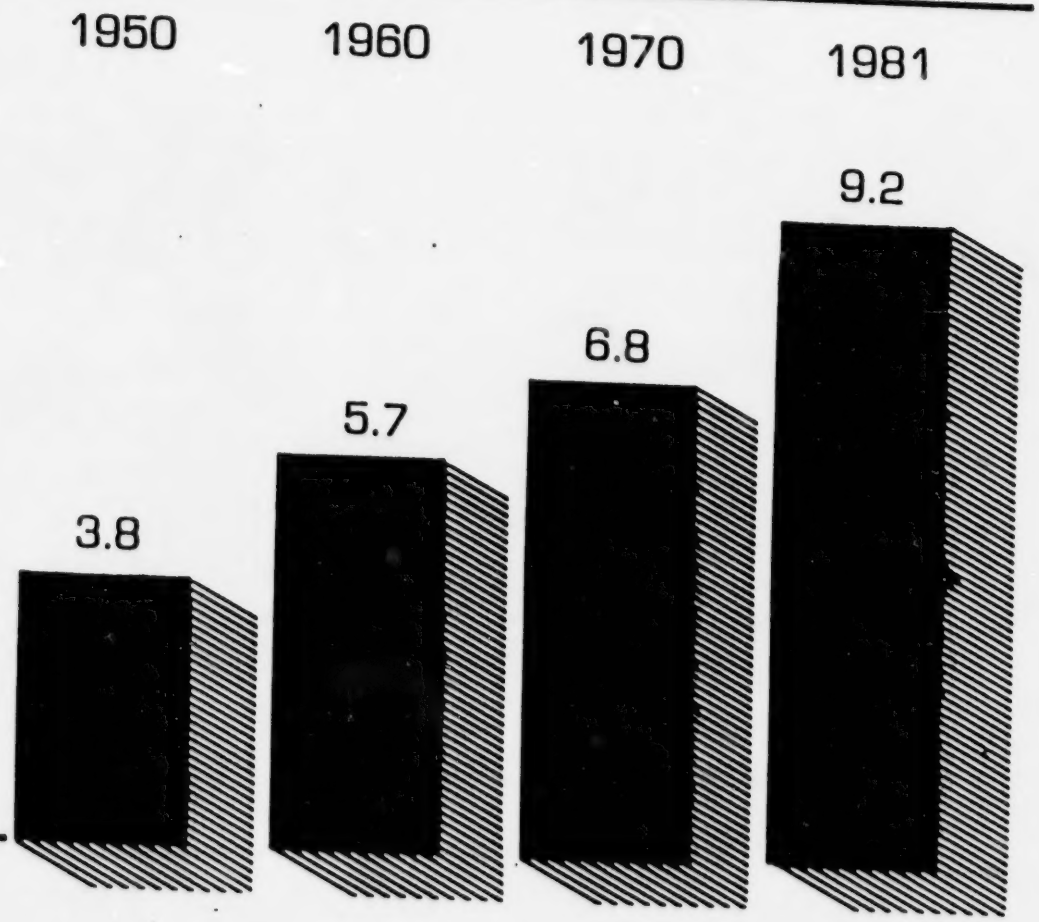
Exhibit 6 lists the American satellite-to-cable services now operating, the currently estimated number of subscribers attributed to each and, in some cases, the method of financing the services. Not all of the services listed are dependant upon subscriber revenues as their only source of income, or upon advertising revenues as their single means of financing their operations. Many incorporate a combination of both sources to varying degrees.

No less than 30 of all of the available satellite-to-cable programming services are dependant entirely or partly on revenues derived from the sale of airtime to advertisers. As the analysis in Chapter Two indicates, however, the total amounts spent each year in all forms of advertising throughout North America has slowed in its rate of growth and will not easily accommodate new opportunities unless they attract large, valuable audiences to the advertisers. While advertisers are becoming more selective and are investing larger portions of their budgets to reach more closely targetted customers, even special-interest programming services delivered by satellite will have to prove their worth with substantial audience results.

Many satellite-to-cable services will flourish and take their place in the roster of popular viewing choices available to subscribers. New services will certainly be added when full direct-to-home satellite facilities become available and are put to use. But we do not yet know how great the diversity in service will be or how broad the choice in viewing will become.

In the end, their success or failure will depend upon the support of viewers/subscribers and/or the commitments of advertisers. The number of survivors will not be determined by the capacities of the available satellites.

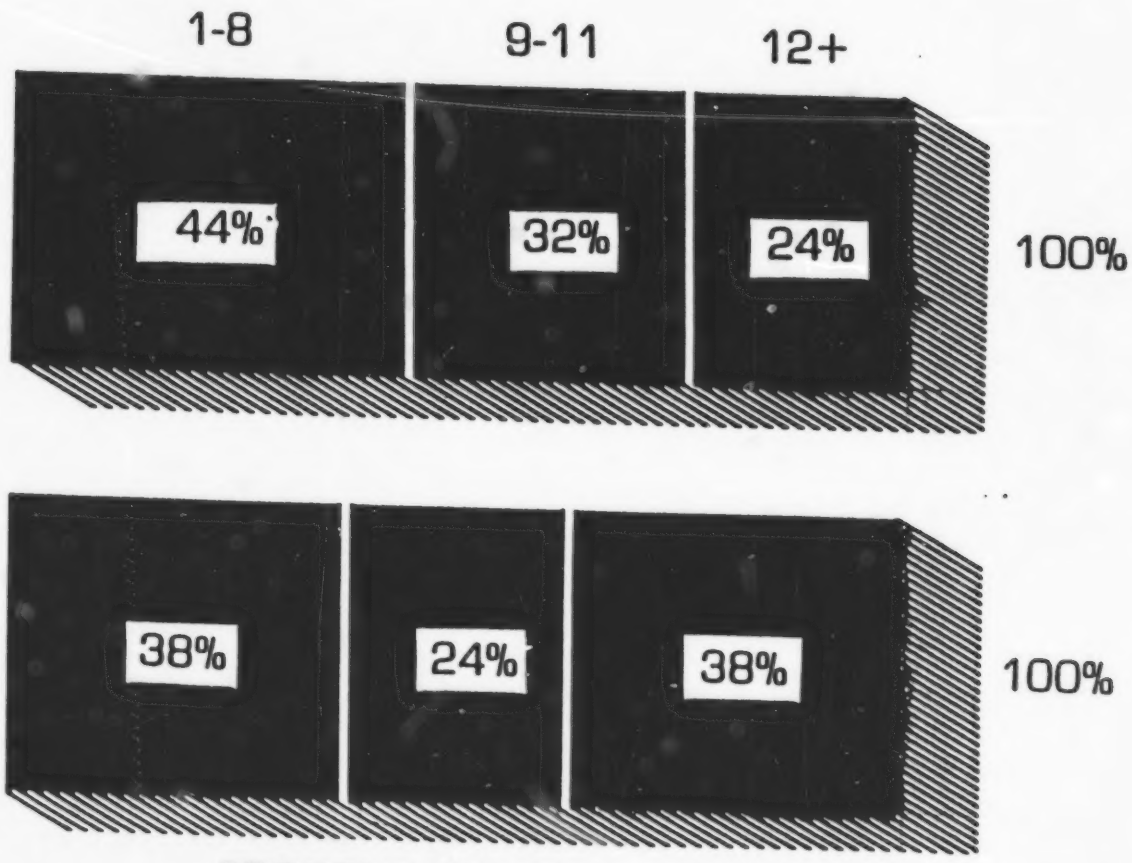
NUMBER OF STATIONS AVAILABLE PER AVERAGE HOME



SOURCE: NTI SAMPLE

Exhibit 5.I

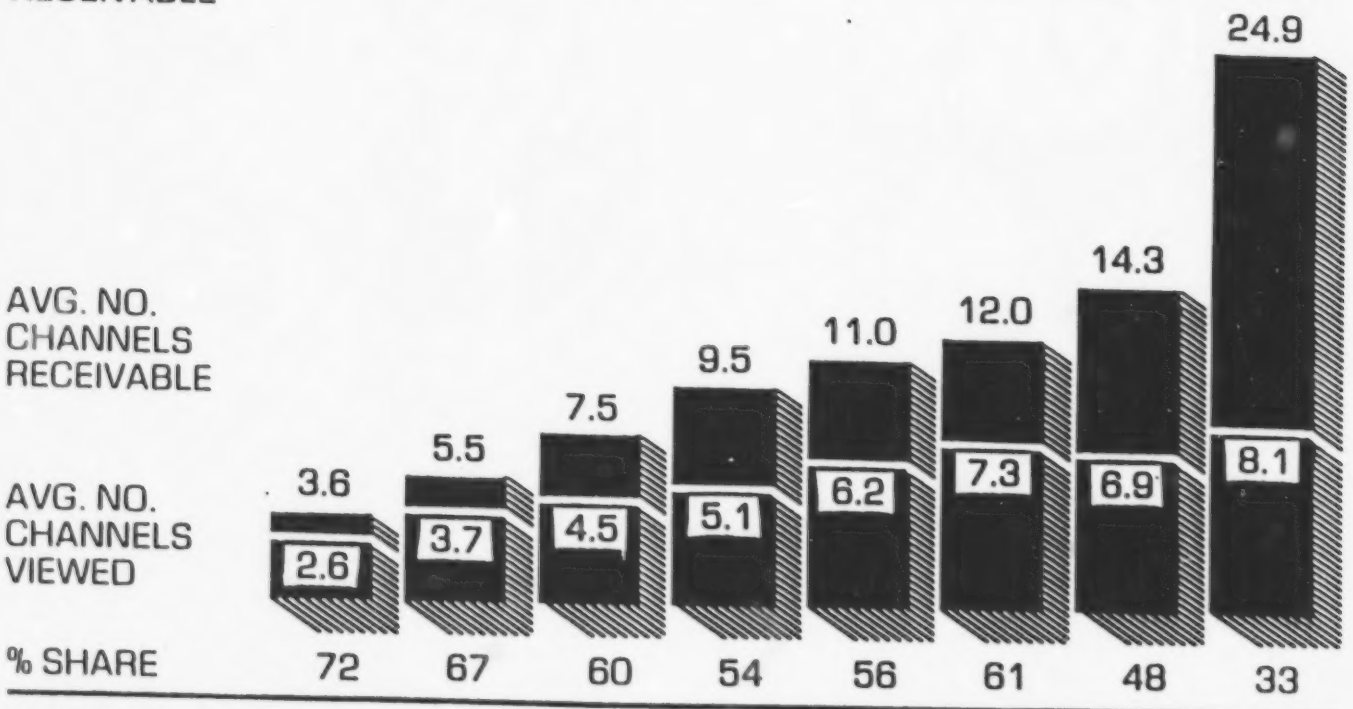
CHOICES AVAILABLE TO THE PUBLIC



SOURCE: NTI SAMPLE, MAY 1981

Exhibit 5.2

DO HOMES WITH MORE CHANNELS AVAILABLE VIEW ADDED CHANNELS?



MAY 18-24, 1981

Exhibit 5.3

DBS NEWS, December 1985

Exhibit 5.4

SCRAMBLING ROUNDUP

	Start Date	System	Marketing Plan	Price for Service
Programmers				
ESPN	N/A	None	None	None
CNN	July 1986	VideoCypher II	Sale to Cable and TVRO	$25/month
USA Network	End of 1986	VideoCypher II	Cable	N/A
CBN Network	Fall of 1986	VideoCypher II	Cable Only	N/A
MTV	July 1986	VideoCypher II	Cable and TVRO	N/A
VH1	Same as MTV	VideoCypher II	Cable and TVRO	N/A
Nickelodeon	Same as MTV	VideoCypher II	Cable and TVRO	N/A
WOR	N/A	VideoCypher II	Cable Only	N/A
Showtime/TMC	May 1986	VideoCypher II	Cable and TVRO	N/A
Nashville Network	N/A	VideoCypher II	N/A	N/A
BET	N/A	VideoCypher II	N/A	N/A
Disney Channel	Summer 1986	VideoCypher II	Cable	N/A
HBO/Cinemax	N/A	VideoCypherII	Cable and TVRO	$12.95/month
Lifetime	January 1987	VideoCypher II	Cable	None
MSOs				
TCI	January 1987	VideoCypher II	TVRO	$6.00/month for service; plus $6.00 for basic package; a la carte basic services and pay services available
ATC	Immediate	VideoCypher II	TVRO	N/A
Sammons	N/A	VideoCypher II	N/A	N/A

DBS NEWS, December 1985

Exhibit 5.5

SCRAMBLING ROUNDUP

	Price for Decoder	Satellite	Notes
Programmers			
ESPN	N/A	Galaxy I	Survey of affiliates under way
CNN	N/A	Galaxy I	
USA Network	N/A	Satcom 3R	
CBN Network	N/A	Satcom 3R	Affiliates to pay for headend decoders
MTV	N/A	Satcom 3R	
VH1	N/A	Satcom 3R	
Nickelodeon	N/A	Satcom 3R	
WOR	N/A	Galaxy I	Eastern Microwave will pay for uplink hardware
Showtime/TMC	N/A	Satcom 3R	Will supply 800 number for TVRO subscribers
Nashville Network	N/A	Galaxy I	
BET	N/A	Satom 3R	
Disney Channel	None	Galaxy I	Testing will begin March 1986; Willing to permit cable oper-operators to offer programming to TVRO market
HBO/Cinemax	None	Satcom 3R	HBO and Cinemax can be purchased together for $19.95/mo.
Lifetime	None	Satcom 3R	Willing to permit cable operators to offer programming to TVRO market
MSOs			
TCI	None		Negotiations with additional programmers continuing
ATC	$395.00		No plans to offer programming package; offering limited to sale of decoders
Sammons	N/A		Sammons has purchased 2,000 home decoders from M/A-Com

Exhibit 5.6

A GUIDE:

SATELLITE CHANNELS

BASIC CHANNELS

NAME OWNER LAUNCH DATE	MEANS OF SUPPORT	HOMES REACHED (MILLIONS)	TARGET AUDIENCE	CONTENT
Entertainment & Sports Programming Network (ESPN) ABC Video Enterprises; [illegible] *Sept. 1979*	System pays [illegible]¢ per subscriber; advertising	36.5	General (esp. male)	NHL hockey, college football and basketball auto racing, boxing, golf, and tennis. Sports updates several times daily Business news
Cable News Network (CNN) Turner Broadcasting *June 1980*	System pays 15¢-22¢ per subscriber; advertising	33.1	Upscale general	Continuous hard news reporting; live coverage of breaking stories; interviews; documentaries; special features
USA Network Time Inc; Paramount Pictures; MCA Inc *Sept. 1977*	System pays 7¢-10¢ per subscriber; advertising	30.6	Upscale general, all ages	Broad-based entertainment: prime-time sports *Night Flight* (video art and music), news magazines, children's health and comedy shows, syndicated programming, movies, USA-produced programming
CBN Cable Network Christian Broadcasting Network *April 1977*	Advertising	29.7	Families	Family programming including classic films, comedies, westerns, children's shows, game shows, inspirational shows
Music Television (MTV) MTV Networks Inc. *Aug. 1981*	System pays 10¢-15¢ per subscriber; advertising	27.3	12-34-year-olds	On-air vee jays, rock videos, concerts, interviews, music news (Pay for exclusive rights to some premiere videos)
Nickelodeon MTV Networks Inc. *April 1979*	System pays 10¢-15¢ per subscriber; advertising	25.7	Children, adolescents	Children's programming variety and adventure shows, cartoons, preschoolers' programming, comedy series. Classic [illegible] shown nightly
Nashville Network Opryland Inc *March 1983*	Advertising	25	General	Country-oriented entertainment including [illegible], music videos, and game shows. Grand Ole Opry concerts
Lifetime Hearst, ABC, Viacom *Feb. 1984*	Advertising	23.8	General (esp. female)	"Programming devoted to health, science, and better living": nutrition shows, shows on fitness, preventive medicine, [illegible] weekday movies
Cable Satellite Public Affairs Network (C-SPAN) Nonprofit corp. of cable companies *March 1979*	System pays 3¢ per subscriber	21.5	Adults interested in public affairs and news	Live [illegible] U.S. House of Representatives debates, congressional hearings; national call-in shows; profiles of public figures and current issues

	NAME OWNER LAUNCH DATE	MEANS OF SUPPORT	HOMES REACHED (MILLIONS)	TARGET AUDIENCE	CONTENT
FNN	**Financial News Network (FNN)** Financial News Network *Nov 1981*	Advertising	19	Upscale professionals	National business and financial news, stock market reports, talk shows, continuous stock ticker. 6 A.M.-8 P.M. daily
THE WEATHER CHANNEL℠	**The Weather Channel** Landmark Communications *May 1982*	System pays 5¢-7¢ per subscriber; advertising	19	General	Local, regional, and national forecasts, seasonal outlooks. Special forecasts for sports, aviation, travel, and school
Arts Entertainment	**Arts and Entertainment Network (A&E)** Hearst Corp., ABC Video Enterprises; RCA Cable *Feb 1984*	System pays 5¢-7¢ per subscriber; advertising	17.3	Upscale families	Dramatic and adventure series; comedy; Broadway plays; films; documentaries; variety specials; music, dance and opera. 8 A.M.-4 A.M. daily
CNN HEADLINE NEWS	**CNN Headline News** Turner Broadcasting *Jan 1982*	No charge if CNN is carried; otherwise 20¢-22¢ per subscriber; advertising	17	General	Major headlines and hard news in 30-minute cycles. (Also carried on more than 100 broadcast stations)
PTL THE INSPIRATIONAL NETWORK	**The Inspirational Network (PTL)** Heritage Village Church and Missionary Fellowship *April 1978*	Viewer donations	12	Christian families, general	Inspirational programming, talk shows, music, news, specials. (Also carried on a number of LPTV and SMATV systems)
SPN	**Satellite Program Network (SPN)** Satellite Syndicated Systems Inc. *Jan 1979*	Advertising	11.8	Upscale general	Regular series on hobbies, business, finance, personal money-management, entertainment and health care programs; how-to shows; classic movies; international programming; sports
SCORE	**SCORE** Financial News Network *May 1985*	Advertising	11	Sports fans	Live sports news, syndicated sports events, sports ticker
MSN	**Modern Satellite Network (MSN)** Modern Talking Picture Service Inc. *Jan 1979*	Program producers pay for air-time; advertising	10.6	General	Consumer information, product demonstrations, *BizNet News Today, Consumer Inquiry*. 10 A.M.-P.M. Mon.-Fri.
BET	**Black Entertainment Television (BET)** Telecommunications Inc., Taft Broadcasting, HBO, Robert L. Johnson *Jan 1980*	System pays 3¢ per subscriber; advertising	10	Black community	Black-oriented entertainment: college sports; musical events; political discussions; phone-in shows; talk; variety; public and cultural affairs shows; movies; jazz and soul videos; "Jospel"
HSN HOME SHOPPING NETWORK	**Home Shopping Network** N.A. *July 1985*	From merchandise sold over the		Cable	shop-at-home television service
MTV	**Video Hits 1 (VH-1)** MTV Networks Inc. *Jan 1985*	No charge. MTV is ca otherwise 10¢-15 subscri advert			On-air deejays; soft rock, R&B, quality music and Top-40 music videos
SILENT NETWORK	**The Silent Network** Sheldon Altfeld *Jan 1984*	Adverti			Entertainment and instructional programming in sign language, normal sound, and open captions

NAME OWNER LAUNCH DATE	MEANS OF SUPPORT	HOMES REACHED (MILLIONS)	TARGET AUDIENCE	CONTENT
The Learning Channel (TLC) Appalachian Community Service Network *Oct 1980*	System pays 36 5¢ per subscriber	6	Adults	Lifelong learning for adults including information and public affairs, how-to programs, small-business management, resume-writing, career development, parenting 6 A.M.-4 P.M. daily
Country Music Television Telestar, Music Village USA *March 1983*	Advertising	5 5	18-54-year-olds	Country-music videos, live concerts
Electronic Program Guide United Video Inc *March 1982*	Advertising	4 8	Cable viewers	Program guide for local and national cable stations
Trinity Broadcasting (TBN) Paul F Crouch *May 1978*	Donations	4 5	Families	Christian-oriented fare: talk shows, variety shows, musicals, Bible studies, children's shows
AP Newscable Associated Press *June 1965*	System pays according to no of subscribers	4 2	General	Text news service: national, state, sports, and financial news
Reuters News View Reuters *April 1971*	System pays according to no of subscribers	4 2	Upscale professionals	Text news service: general and financial news, sports
Spanish International Network (SIN) Televisa S.A. Rene Anselmo *Sept 1979*	Advertising	4 1	Spanish-speaking community	Programs in Spanish: news, soap operas, sports, musicals, novellas, movies, and mini-series
Update Telecrafter, TCI *Nov 1983*	System pays according to no of subscribers	4	General	Text news service: general and financial news, sports
Eternal Word Television Network (EWTN) Mother M Angelica *Aug 1981*	Donations	3 8	Catholic community	Catholic religious programming, family entertainment 8 P.M.-midnight nightly
ACTS Satellite Network Southern Baptist Convention *May 1984*	Ad[illegible]	3 5	Gen[illegible]	"Wholesome" Christian family entertainment
National Jewish Television Joel Lovitch *May 1981*	Advertising	3	[illegible]	[illegible] panels, educational shows, magazine programs on Israel [illegible]
Dow Jones Cable News Dow Jones Co *April 1981*	Sy[illegible]	[illegible]	Upscale professionals	[illegible] text news service: general and financial news, sports
[illegible] Nova Communications [illegible]	Adver[illegible]	[illegible]	18-49-year-[illegible]	Music videos and entertainment documentaries on 12 [illegible] broadcast stations
[illegible] Christian Network (NCN) [illegible] *June 1980*	Fees pro[illegible] pr[illegible]	[illegible]	[illegible]	Religious [illegible] talk shows, children's shows

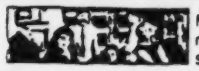
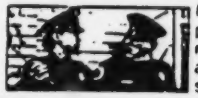
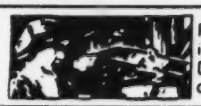
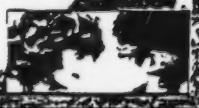
	NAME OWNER LAUNCH DATE	MEANS OF SUPPORT	HOMES REACHED (MILLIONS)	TARGET AUDIENCE	CONTENT
APNEWSPLUS	**AP News Plus** Associated Press, Tribune Media Service *Jan 1985*	System pays according to no of subscribers	700,000	General	Graphics-enhanced automated news service weather, sports, business
Family Channel	**Genesis Cable Storytime** Genesis Research Corp. *Oct 1983*	6¢ per subscriber	650,000	Families, children	Video picture storybooks
	Boresight Shawn Kenny *Oct 1984*	Advertising	100,000	Home satellite owners, dealers and manufacturers	News and technical information
American Extasy	**American Extasy** Paul Klein *Jan 1985*	Advertising	50,000	Adults	Soft-core adult movies (Also available to backyard dish owners and licensed SMATV systems)
The Discovery Channel	**The Discovery Channel** Cable Education Network *June 1985*	Advertising	N/A	Upscale adults	Nonfiction documentary programming: nature, science, technology, human adventure, history 3 PM-3 AM

*Black Entertainment Television airs a 12-hour block of programs twice a day.

SUPERSTATIONS

	NAME OWNER LAUNCH DATE	MEANS OF SUPPORT	HOMES REACHED (MILLIONS)	TARGET AUDIENCE	CONTENT
SuperStation WTBS	**WTBS** Turner Broadcasting System, Atlanta *Dec 1976*	System p... 10¢ p... subs... adv... Car... Sa...		G...	Network reruns, sports, movies, news, women's shows, music videos, documentaries
WGN Chicago SuperChannel	**WGN** The Tribune Company, Chicago *Oct 1978*	Sy... 1... su... C...			Network reruns, sports, movies, news
WOR	**WOR** RKO General Television New York *April 1978*			General	Network reruns, sports, movies, news
TX SPIRIT	**KTVT** Gaylord Broadcasting Dallas *July 1984*		1.3	...gion, Southwest	Movies, sports, news, specials
WPIX	**WPIX** The Tribune Company New York *June 1984*	Sy... ad... Cl... Carrier: United Video		General	Network reruns, sports, movies, *Independent News Network*

PAY SERVICES

NAME OWNER LAUNCH DATE	DELIVERY SYSTEMS	NUMBER OF SUBSCRIBERS	CONTENT
HBO* **Home Box Office** Time Inc *Sept. 1975*	Cable, MDS	14.5 million	 Movies, sports, family shows, made-for-pay movies, mini-series, specials
SHOWTIME* **Showtime*** Viacom *July 1976*	Cable, MDS, SMATV	5.4 million	 Movies, Broadway productions, music specials, made-for-pay movies, comedy and dramatic series, mini-series, family programming
Cinemax **Cinemax** HBO Inc., a subsidiary of Time Inc. *Aug. 1980*	Cable, MDS	3.3 million	Feature movies, comedy and music specials
THE MOVIE CHANNEL **The Movie Channel*** Viacom *Jan. 1980*	Cable, MDS, SMATV	3.1 million	Feature films, film festivals, movie marathons
THE DISNEY CHANNEL **The Disney Channel** Walt Disney Productions *April 1983*	Cable	2.1 million	 Family-oriented programming including made-for-pay and Disney movies; classic cartoons 6 A.M.-1 A.M.
The PLAYBOY Channel **The Playboy Channel** Playboy Enterprises *Dec. 1980*	Cable, STV, SMATV, video-cassettes, DBS	740,000	Soft-core adult programming. 8 P.M.-6 A.M.
Bravo **Bravo** Cablevision; CBS *Dec. 1980*	Cable	350,000	American and foreign films, performing arts specials. 7:30 P.M.-6 A.M. Mon-Fri; 5 P.M.-6 A.M. Sat., Sun.
THE NOSTALGIA CHANNEL **The Nostalgia Channel** N.A. *May 1985*	Cable	350,000	Classic movies and vintage television shows, original programming
HTN **Home Theater Network (HTN)** Group W Satellite Communications *Sept. 1978*	Cable, SMATV	300,000	Non-"R" entertainment, foreign and classic movies, travelogues
AMERICAN MOVIE CLASSICS **American Movie Classics**** Cablevision; CBS *Oct. 1984*	Cable	270,000	Classic Hollywood films. 7 P.M.-6 A.M. Mon-Fri; 1 P.M.-6 A.M. Sat., Sun.
Galavisión **GalaVision** Spanish International Network (SIN) *Oct. 1979*	Cable, SMATV, MDS	125,000	 Spanish-language films, weekly dramatic series; sports, musical and comedy specials in Spanish. 3-4:57 P.M.-4 A.M. Mon-Fri; 12-4:57 P.M., 5 P.M.-4 A.M. Sat., Sun.
FUN **The F.U.N. Channel** Fantasy Unrestricted Network *Oct. 1983*	Backyard dishes (Decoders), MSO, Cable	50,000	First-run adult features
SELECTV **SelecTV*** Clarion *Oct. 1985*	STV, LPTV, SMATV, MDS	N.A.	Movies, classics, adult films, sports, children's shows, pay-per-view events

*Showtime and The Movie Channel merged in 1983 but continue to operate separately.

**American Movie Classics can be marketed by individual cable systems as a basic service, a stand-alone pay service, or in conjunction with Bravo as The Rainbow Service.

*SelecTV and ON Satellite TV have merged to form Clarion SelecTV. A combined subscriber count was not available at press time.

PAY-PER-VIEW CHANNELS

	NAME OWNER LAUNCH DATE	PRICE	TIMES	AVERAGE NO. OF SUBSCRIBERS/ NUMBER OF CABLE SYSTEMS	CONTENT
Video Techniques Inc.	**Video Techniques** Video Techniques Inc. *March 1984*	$12 on the average	Twice per month	3 million; 150 cable systems	Sports and entertainment events
EVENT TELEVISION	**EventTeleVision** EventTeleVision *July 1983*	$20 per sporting event; $5 per movie	3-4 yearly, varies according to availability*	2 million; 60-180 cable systems	First-run movies; championship fights; concerts; Broadway shows
	Choice Channel Bob Block, Rick Kulis *Oct. 1984*	$7.50-$20 per event; $3-$5 per movie	6 times a year per event; 10 times a month per movie	1.9 million; 73 cable systems	Movies, concerts, sporting events 9 A.M.-3 A.M. daily
SHOWTIME	**Showtime Pay Per View** Showtime *June 1985*	$3.95-$20 per event; $3.95-$4.95 per movie	Varies according to availability	350,000; 7 cable systems	Movies, sports events, promotions for upcoming features
P.P.V.	**The Pay-Per-View Channel** Request Preference *1985*	$3-$15; $145 for a year's worth of "pay-per-view weekends"	At least twice monthly	350; cable systems N/A	Sports, specials, movies, variety shows, hard-core adult features
THE EXCHANGE	**The Exchange** Viacom Media Enterprises *1985*	Varies	Continuous showings on a 20-hour daily feed	N/A	Movies
PLAYBOY Private Ticket	**Playboy's Private Ticket** Playboy Video Corp. *July 1985*	Determined by individual cable systems; ranges from $3.50-$5	Programs are transmitted by satellite twice weekly for cable systems to tape and rebroadcast	N/A; 4 cable systems	60 minutes of nightly Playboy Channel programs followed by adult films

* The number of subscribers on pay-per-view channels varies with each event. These are typical subscriber counts reported by programmers.
*EventTeleVision will [illegible] movie service beginning in February 1986.
Program services chart compiled by Jane Lusaka

PART SIX

TELEVISION BROADCASTING IN CANADA

AND THE APPLICATION OF SATELLITES

6. TELEVISION BROADCASTING IN CANADA AND THE APPLICATION OF SATELLITES

"In the end the revolution may not be technological in nature but cultural. The lag is classic. The delivery systems have arrived ahead of the product. And in the long run the art of communication, rather than any of the technological miracles, may shape the electronic landscape."

Les Brown, Channels Magazine, 1986 Field Guide

6.1 Future Jurisdiction and Regulatory Options

Satellites may be just a means of delivering programs, but they have begun to re-shape our broadcasting system and the approach taken to regulate and supervise, as well as to establish policies for the system and the players.

We have come to understand a little better what satellites do, how they function, and where they fit within the general scheme of broadcasting. We have not delved too deeply into the technical characteristics of satellites, but we have examined some of the problem areas that are associated to their use.

Throughout this study, one particular feature related to satellites has become very clear: we cannot prevent their reception and the viewing of the unscrambled programs which they make available. Satellites represent a delivery mechanism which knows no other limit than the enormous range of the "footprints" they transmit.

It is not the policy of Canada to attempt to interfere with the reception of satellite-delivered signals, and there is no good reason to do so. In any case, there is no practical electronic umbrella that we could put in place to shield us from this rain of signals from space.

Satellites have now become an integral element of the Canadian broadcasting system, and we recognize the benefits to be derived from their application for broadcast-related purposes. Such use allows the government to realize policy objectives not otherwise attainable, especially for the provision of television service to northern, remote and isolated communities. The CRTC, in responding to the need for an expansion in

the diversity and choice in available programming, sees satellites in connection with cable as the primary instrument for delivery. Broadcasters and other entreprenneurs regard satellites as the chosen means of delivering new services directly to viewers and to cable subscribers.

The operating characteristics of satellites, however, give rise to some concerns about future jurisdiction and regulatory options.

6.2 The Internationalization Brought by Satellites

Because satellite footprints span continents and oceans, and therefore national boundaries, they have fostered a new thinking towards international opportunities. With those opportunities come some new concerns.

It is now possible for program suppliers and the providers of program services to think more broadly when they contemplate their opportunities. Satellites allow their endeavours to be seen simultaneously throughout Canada and the United States, and they are no longer restrained by the single market limitation. In North American terms, the market now consists of some 250 million English-speaking potential viewers; consumers of their works. From the Canadian perspective that opportunity has for all practical purposes been limited to a maximum potential of about 17 million English viewers. It is not surprising that the CBC would seek its own satellite-to-cable superstation to maximize the new international potential.

But until Canada is able to satisfy or to allay the prevailing American concerns over copyright, cable retransmission, and their perspective of Canadian piracy, the dreams of the CBC may be transformed from "let's do it" to "let's not" and the new aspirations of other Canadian programmed service providers seeking access to the enormous American market by satellite may be thwarted.

6.3 Fine-Tuning Our New Opportunities

Most of the perceived and real problems associated with the broadcast-related application of satellite technology are transitional in nature and are sure to be resolved over time, given a responsible attitude to their resolution. Impediments now in place can be

removed or at least minimized to a point of general acceptance. Some of the concerns or fears may be the inescapable consequence of adapting to and adopting the new technologies. Evolution in any form has never been easy.

Some local broadcasting service, have suffered as microwave and cable introduced new competition for viewers and advertising revenue. Some will be likely to suffer further with the advent of satellite delivery. Only the government can determine whether such a price is appropriate, depending largely upon the reaction of Canadians in these communities.

We will have to adjust to satellites and accept that they are here to stay, not because of the problems or difficulties that they create but because of the new services and opportunities that they also provide.

In the meantime, the government, the Commission, the industry and the public will have to fine tune the new opportunities brought by satellites.

The government must appropriately amend the relevant legislation which will clear the jurisdictional hurdles and provide for the necessary copyright provisions.

The Commission will have to play the role of Solomon yet keep the system alive and vital, maintaining essential local service while it provides for expanded diversity and increased viewer choice.

The broadcasting industry, especially the private sector, will have to take into account the realities of expanded competition both for viewers and advertising revenue and will be obliged to seek effective relaxation of regulation together with enlightened government policies.

The public, for its part, will have to understand and more fully appreciate that there is neither the resource nor the practical means to supply an ever-expanding diversity of signals or choice in programming.

PART SEVEN

SUMMARY AND CONCLUSIONS

7. SUMMARY AND CONCLUSIONS

> "Impending technological changes bestow new dimensions on the problem of Canadian content... A promiscuous open skies policy would, given the nature of our case, prevent the very things we seek, which includes that which is universal and cosmopolitan, as well as those things which reflect our natural concerns and experiences... The time is now most opportune for the active and relentless consideration of remedial measures by all concerned..."
>
> Dr. John Meisel, 1981, former CRTC Chairman.

7.1 Summary

The principal result of this study is the absolute necessity for determining once and for all the separation between content and delivery, often referred to in the past as the vital distinction between content and carriage. Surely we must be primarily concerned with what is provided, not how it is delivered or received.

Satellites are simply a relatively new, alternative and different means of delivery of broadcast signals. People don't watch the method of delivery, they choose to watch programs, one by one, regardless of their source or means of access.

That position is not offered to diminish the importance of satellites within the Canadian broadcasting system, but merely to put the technology into perspective.

The advance of satellite technology will irreversibly affect the structure and the performance of the system. It is the extra-territorial feature of signal distribution by satellites which introduces both positive opportunities and some new problems. For the provision of television service to small and remote communities, satellites have become essential, and for the delivery of new special-interest programming services as well as conventional broadcast signals, satellites are the preferred means of distribution. In a DBS mode, satellites will open-up a completely new opportunity for providing service directly to the home.

Four areas emerge as the central focus of the study of satellites and their role within the system: the first and most important is the factor of cost,

particularly for service to northern and remote areas; the second is the use of CANCOM as a private sector instrument for public policy; the third is the question of diversity vs. choice, and the fourth is in regard to copyright and contractual rights.

From whatever angle satellites and their relationship to broadcasting was considered, the factor of cost prevailed as the most significant area of concern. Whether expressed in terms of marketplace economics which directly or indirectly governs diversity and choice or, more significantly, whether it relates to the actual reception of service in small and distantly located communities, it is obvious that the factor of cost must be immediately addressed.

CANCOM was invented and licensed to provide Canadian television service to areas of Canada that had little or no choice in viewing at all. In the four years since it came into existence it has incurred losses exceeding $32 million and its original mandate has been amended to allow it to add distribution of four U.S. signals and to extend its service into the more heavily populated southern areas. These changes, while allowing improvements to CANCOM's bottom-line performance, have come about in conflict with a number of other interests.

Given the research study conducted by A.C. Nielsen, there is a concern that the simple increase in volume of available signals does not in fact represent an improvement in real choice of programming. The duplication factor, present within the CANCOM package, is of utmost importance, but so are the attendant economics of time and money devoted to attaining greater choice. Less than half of the total number of conventional signals available to Toronto cable subscribers, for example, offer real programming choice and alternatives.

While we continue to make more equitable the provision of television service throughout all of Canada, we are encountering a wide range of copyright and contractual rights problems which confront policy making, regulation and the operation of broadcasting services. Some of these difficulties may be transitional and will ultimately be resolved. Some may be much harder to deal with in both the mid and long term. All of them require immediate attention. While Canada continues to update and revise its copyright law, it may be five years before any new benefit or resolution is realized. In the meantime, we will continue to be confronted with unsatisfied concerns, particularly those held by American interests.

We accept that satellites are now an integral part of the Canadian broadcasting system, and that they are likely to play an even more important role in our general capacities to communicate, particularly when direct-to-home service becomes a reality.

7.2 Conclusions and Recommendations

We have attempted to conduct an objective study of satellites and their role within the Canadian broadcasting system. From the outset, we accepted that it was the responsibility of the Task Force, given all of the information available to it, to come forth with whatever recommendations were felt to be appropriate to address future broadcasting policy. Since this work was designed to be informative and perhaps instructive, some conclusions and recommendations are nevertheless both obvious and necessary.

- There must be a clear and effective distinction between content and distribution, which has sometimes been referred to as the separation between content and carriage. Without such a distinction given in the Broadcasting Act and reflected in both policy and regulation, we will continue to experience confusion and difficulties arising from the tensions between the two interests.

- Technological advance should be accommodated. The Broadcasting Act provides for it. Technological advance should not, however, occur at the expense of the objectives of the Act since technological advance relates to carriage or distribution and not content. Content and distribution, while interdependant, must be separate.

- Telesat rates for broadcast use must be rationalized, if necessary supported by the federal government under the provisions of the Act which states: "All Canadians are entitled to broadcasting services in English and French as public funds become available". Such a support of Telesat rates would, of course, benefit the provision of service to remote and northern communities by CANCOM.

- CANCOM rates, particularly for provision of needed service to northern and isolated communities, must also be rationalized, supported by the federal government by, for

example, one of the following means as is provided for in the Act:

1) by allocating, on a per-capita basis, funds directly to CANCOM as support in form of payment for the performance of service to these Canadians that the government has declared to be in need, or

2) by allocating to each designated community in need sufficient funds to cover the full capital cost of the facilities required to receive and to distribute the signals received from CANCOM, or

3) by allocating to each such community or individual household funds to acquire (or supply directly) the necessary decoding apparatus for the reception of the signals distributed by CANCOM.

- The federal government by policy and the CRTC through its regulatory process must ensure that CANCOM is contained in its activity in the "replacement" market areas. Not to do so will exacerbate the existing tensions between all affected parties.

- Prior consent to satellite and cable redistribution and the right to deny such extended exhibition of a signal and the programming it contains must be accorded to the signal originator.

- As swiftly as the process will permit, the government must adopt and enshrine in legislation provisions for a retransmission right in copyright as would affect both cable and satellite delivery. This is in keeping with the recommendation of the Parliamentary Sub-Committee's report of October, 1985. The right and benefits should accord to both domestic and foreign interests.

- The government and the Commission should take all possible and practical measures to support the maintenance of exclusivity related to program exhibition by Canadian

licensees who, through lawful contracts, have obtained and paid for such rights.

In keeping with the spirit and intent of these recommendations, it is also necessary to maintain the benefits to the Canadian broadcasting system which flow from such important measures as Bill C-58, simultaneous program substitution and any and all measures, established or new, which will serve to maintain the continuing viability of Canada's local stations and established networks.